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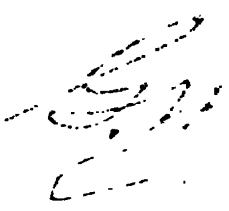

Vires Vitales Sustinets.

TRANSACTIONS

OF THE

NATIONAL ECLECTIC MEDICAL ASSOCIATION

OF THE

UNITED STATES OF AMERICA

FOR THE YEAR ENDING JUNE 19, 1902,
INCLUDING THE PROCEEDINGS OF THE THIRTY-SECOND ANNUAL MEETING,
HELD AT MILWAUKEE, WISCONSIN, JUNE, 1902,
TOGETHER WITH THE

ADDRESSES, REPORTS, PAPERS AND ESSAYS

PRESENTED BEFORE THE SEVERAL SECTIONS
IN THEIR SITTINGS.

EDITED BY FINLEY ELLINGWOOD, M. D., SECRETARY,
CHICAGO.

VOL. XXX.

CHICAGO:
1902.

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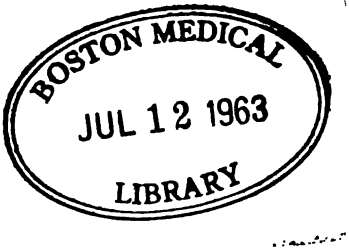

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Meeting of 1903 will be held at Indianapolis, Indiana, June 9th, 10th, 11th.

Vires Vitales Sustinete

NATIONAL ECLECTIC MEDICAL ASSOCIATION.

MILWAUKEE MEETING.

NINETEEN HUNDRED TWO.

PART I.

ADDRESSES AND ESSAYS.

ADDRESS OF THE PRESIDENT.

GEORGE W. JOHNSON, M. D., SAN ANTONIO, TEXAS.

Ladies, Gentlemen, and Fellow Eclectics:

Organizations are formed for the purpose of maintaining principles that furnish foundation for their inception; advancing the individual interests, and, by concerted action, give support and assistance to all that tends to better prepare for the duties of a useful life. Through and by the efforts that are necessary to maintain organizations, the moral, intellectual and scientific interests accruing therefrom are felt by the individual membership. The commercial interests of different sections of the country are brought in closer touch through the influences arising from convention, and as individuals we are made to feel that there is something more than self to be considered. An appreciation of all that tends to upbuild our country is vividly portrayed to us by association with our fellow-man in convention.

We as individuals are playing our part in the drama of life. We cannot gain solace through the inspiring, elevating and purifying beauties of music; nor are we in position, through art, to appreciate the unity of selection and exclusion. The sculptor has the advantage of being able to suppress the stooping shoulder, the knobby hips, and the bandy legs. The physician is compelled to meet anatomical relations and physiological manifestations

and deal with them as undoubted facts. His work is devoted to correcting departures from the standard of health that come from disease and accident.

We have met in this, our Thirty-second Annual Convention, believing that the medical world will profit by our having met; that the medical principles we represent will be advanced; and that we will by association be strengthened and enabled to better perform the duties assigned us in our professional work.

Man is by nature a social being. Association with his fellow-man awakens within him purer and loftier motives, enlarges his sphere of usefulness, and stimulates him to renewed efforts to accomplish whatever he undertakes. Mutual interests in social and scientific relations stimulate men to a higher appreciation of life in all of its applications. This fact, with the desire to raise man's efforts to a higher plane of perfection in his life's work, should prompt him to renewed energy and encourage him to give support towards maintaining the principles he conscientiously believes to be right and just.

As we become acquainted with mortal life through experience, uninfluenced by any philosophic or artistic mental activity, we are forced to recognize it as complex, confused and irrational. From early babyhood, when we are constantly subjected to pain, the result of our ignorance of surroundings, until we are brought to realize the magnitude of our relations with our fellow-man, we constantly find our faculties, both animal and divine, encountering a world not kindly adjusted. On the material plane we find disaster, famine, storm, disease. On the plane of feeling and sentiment there are the unpleasant feelings that come from separation from friends and loved ones, doubt, and disappointment. In such a world, fortune sometimes seems insulting, and happiness has the effect of misery.

However, man in his efforts to improve upon his circumstances, has fought sturdily against the capriciousness of life and the despair it engenders. The moral and just man, facing the universe undaunted, asserts his every power and energy to develop in it at least his personal interests in all that tends to upbuild his fellow-man and lend color to the intellectual standing of his associates. If he be just, he at least will be controlled by reason.

We have met in convention for the purpose of enlarging upon the well established principles of Reform Medicine, with a keen realization of the personal benefits that may accrue; to

give to each other that moral and scientific encouragement that each and every individual requires in his efforts to maintain his professional position in the intellectual world.

The medical profession bears a close relationship with all that tends to further the principles that necessarily enter into the interwoven fabric composing the commonwealth. The physician is of necessity placed in a position to be a factor in his community in all that tends to improve upon morals, wealth and health. His every act and purpose is for good or for bad. While his conduct, if bad, is to a certain extent overlooked by those who have become attached to him through acts of kindness, yet his conduct may result in moulding a young life into one of good or bad because of his relation with his fellow-man. A physician's interests necessarily become identified with those interests that go to make up a state, nation and community. He is called upon, not only to administer to the physical imperfections of his fellow-man, but as well to give moral support and advice to those whose confidence he has gained. His duties at once present themselves in such light as to be realized as touching the very principles that constitute the foundation upon which rests all that contribute to the well-being of the human family. No greater responsibility could be man's; and to reach this goal of perfection in a life work, which should be the ambition of every true physician, he should receive the hearty support of his co-workers in this grand undertaking.

By organizing our State and National Associations, we have been enabled to maintain and further the interests of our system of medicine, a system the severest criticisms have failed to disprove, a system the principles of which appeals to the judgment of the intellectual mind as being correct. That feeling, to become more thorough and scientific in matters pertaining to preserving health and dealing with disease, a feeling that should transcend all desire to personal advancement, has furnished the stimulus that has caused our physicians never to falter in their efforts to add to the already improved system of medicine and to give their hearty support through organization.

With the petty and selfish purposes that naturally creep into organization much disharmony has resulted, but this should not, and does not deter those who are honest in their desire to maintain true principles. We look back in the past and recognize a record that is true in all of its relations. Whatever may have been the mistakes, they remain a true record of our acts, and

what resulted through and by the circumstances presenting at the time. But when we come to look forward into the dim and uncertain vista of the future, we cannot help feeling the responsibility of our situation.

A true purpose in life will be of great assistance to us in fathoming mysteries that may appear. By association in organized work we are enabled to recognize the mistakes of the past and very much improve upon what may arise in the future. By association in convention the moral, social and intellectual character of man is elevated.

We have met here in convention from the North, South, East and West for this purpose. The magnanimity of the North joined hands with the chivalry of the South in this grand and great work of improved medicine. We represent different religious and political beliefs; our interests are different when we come to consider our citizenship in different sections of the country; but when the question of dealing with disease arises, we are a unit.

What concerns us is to know if Eclecticism, in its present form and in its modern application, represents a system of medicine that can be defended as one justifies his individual conduct towards his neighbors, a system that is scientific in its teaching, a system that conduces to the better understanding of drug action in disease, a system that is generous, humane, and a benefactor in relieving human suffering—or is the contrary true? If what is contained in this proposition is true, and I conscientiously believe it to be, we have every right to strive to maintain our system of medicine so long as our efforts are legitimate and in accord with those principles that enable us to extend the same privileges to all who conscientiously differ from us. It is no longer necessary that an effort be made to establish the truth of Eclectic principles. This has been done, and we in convention are adding our mite to a well developed fact, by contributing to a better understanding of disease expression and drug action.

Eclecticism is considered by those who are informed as to what its teachings are, as a mere latitudinarianism without any end or aim in view. This is a great injustice to the system of medicine we represent. Again, it is considered by some to be a compromise between Allopathy and Homœopathy, which is also an injustice. It is a system that conveys to the investigating mind scientific reasoning with reference to disease expression and specific direct medication, for the correction of pathological con-

ditions. Specific Diagnosis and Specific Medication furnish the searchlight that has enabled the medical profession to discover hitherto hidden crevices in the healing art; and with it we, as Eclectics, hope to accomplish more in the future than has been dreamed of in the past. Indeed, Specific Diagnosis and Specific Medication furnish the two scientific pillars upon which rests the great archway to Medical Reform in Medicine. This archway opens into the great scientific field of medical research. It is illuminated by the incandescent lamps of justice, the power being furnished by the dynamo, the Golden Rule. A great and grand army of honest men have chosen to march beneath this great evidence of scientific truth and medical reform; and by so doing they have proved to the world that they are sincere and honest and have the best interests of the healing art at heart.

While Specific Medication is one of the distinguishing features of Eclecticism, I wish it distinctly understood that it is not something that can be attached to any system of medicine. It is frequently claimed by those who are unwilling to accept our system as a whole, that they prescribe medicine for a specific—direct—effect. We have another distinguishing feature, that of Specific Diagnosis, which these persons seem unwilling to accept, and which enables us to make a study of disease, separate its component elements; thereby we are brought in direct relationship with disease manifestations, which guide us in the use of drugs of proven therapeutic value. This disease language, when properly interpreted by the physician, enables him to at once come in touch with the conditions of disease that assists him to successfully apply drugs of proven therapeutic value for its correction. As one who can so construct sentences as to convey to the reader's mind the beauty of thought, so the physician who can correctly interpret disease expression can the more satisfactorily apply drugs for the relief of pathological conditions. We claim to be Eclectic physicians, and feel justified in making this claim because we feel it our duty to make a study of disease, analyze disease if you please, and make such selections of drugs as will meet the pathological manifestations, ever bearing in mind that law of cure expressed in *Vires Vitales Sustinete.*

The word "regular" is used by some to designate physicians who belong to the old school—Allopathic; and "irregular" to stamp physicians who claim the right to select for themselves remedial agents in the cure and relief of disease, as a class who oppose medical progress. It is not quite clear in my mind what

is meant by these terms. If it is meant that a man who is willing to analyze his individual case and select remedies with a view of meeting the indications presenting in a given case is an "irregular," then I am an "irregular." If the term "regular" is meant to convey to the mind that a physician is not allowed to choose a remedy without the approval of the entire medical profession, then I am glad to announce that I am not a "regular."

Again we are spoken of as being sectarian. This to my mind is not justice to our system of medicine. If by sectarian is meant that we are governed in prescribing for disease by the pathological language furnished in a given case, then accuse me of being sectarian. If it is intended to create the impression that we, as Eclectics, are opposed to medical progress, then I positively deny the charge.

We as Eclectics do not, nor ever have opposed medical progress. We believe that our attention should first be directed to Special Diagnosis, which will enable us to better understand disease expression; then to Specific Medication, which will enable us to satisfactorily apply remedies for the correction of pathological conditions manifesting themselves through disease expressions. This, to our minds, is the only rational solution of scientific medicine. It matters not what the name of a disease may be, it is imperative that we use rational and scientific means to correct it; and in using drugs for this purpose, their physiological action must be well in mind. If this can correctly be termed "irregular," then again I say, call me "irregular."

Great latitude has been given along the lines of regular, irregular and sectarian medicine by those who are disposed to condemn eclecticism. We all study medicine in the same regular systematic manner, with the difference that we make different application of drugs for the relief of disease. We as Eclectics believe that disease cannot be considered as an entity. We believe that the same conditions in different individuals must be met through the assistance rendered us by a proper analysis being made of disease. I presume that the man who dares to select a remedy from any source, because it has proved good, should be stamped as an irregular, or a quack. If this is the trend of the medical profession to-day, it is high time that a halt be made.

Surgery, that branch of our science that has made such rapid strides in the past decade, is greatly assisted by properly selected remedies of proven therapeutic value. Just when drugs should cease to be used and surgery step in in a given case is not by

any means easily determined. Surgery has done much to rid the human body of offending pathological conditions, but I am sincere when I say that some physicians have been too sanguine as to what to expect of surgery, and have gone on in their efforts to relieve disease without giving due consideration to other remedial agents. This is no reflection on skillful surgery, but is a course that reflects on the judgment of the individual physician. No school of medicine has a monopoly on surgery. Each school of physicians are taught the same anatomy, physiology and pathology. It is absurd to claim that one class of physicians has, other things being equal, the advantage of another in surgical work.

It is not my wish to recall the persecution of Beach, Newton, Jones, King, Scudder and Howe, or the early history of Eclecticism. The names of these men will ever be dear to every true Eclectic physician, as indeed they should be to every true American. These men were honest in their purpose, and scientific in their teaching. They have left landmarks of their superior intellects. It is of the present that we are concerned. Eclecticism presents a broad platform of scientific reasoning upon which all physicians who have the best interests of their patients at heart may unite for the purpose of studying drug action for the cure of disease. Under its comprehensive influences, all physicians who are conscientious and unhampered by pompous authority may concentrate their energies for the better understanding of disease. It is based upon proven scientific truths that at once appeal to the investigating mind. In the language of our late Prof. A. J. Howe: "The Eclectic system of medicine, which claims me as an humble representative, is no *ignus fatuus,* no will-o'-the-wisp, flashing for the moment, then gone forever, no idle fancy springing from a zealot's brain, no feeble infatuation with an existence prolonged by sufferance or continued through feelings of pity. But it is a living reality, proud of its being and confident of its growing strength. Possessing all the vigor of youth and thrilling with an exhuberance of vitality, having within no elements of dissolution, nor signs of decay, it steps forth the giant of the age."

Medical fakism seems to be running "rampant" in this country. Men who are, possibly, in possession of all the scientific knowledge that any medical college can impart to them, are coming before the people claiming to possess supernatural healing powers, thereby placing themselves, by their advertisements, far

ahead of all serious and honest physicians. They claim to be in possession of secret formulas by which all diseases the human flesh is heir to can positively be cured. They do not stop here. They are using the press to put before the people their claims of unparalleled ability, in literature that should not be allowed to go into the homes of our families. By these advertisements they not only have an immoral effect upon the younger members of the community, but they publish statements that all thinking people know to be untrue. This odium has not been confined to any particular school of medicine, but has emanated from every source of medical knowledge. The influence of this course of practice is far-reaching and should be denounced by every true American citizen.

Graduates in medicine should feel it a sacred duty to uphold and extend the high reputation of their colleges. This inspiration is a noble impetus to right doing. In any unworthy acts, or unprofessional conduct, we lessen the pride of every graduate in his Alma Mater and diminish the respect of all our people for her sons. Not alone our colleges suffer in reputation, nor the pride of their graduates, that is wounded by unworthy acts of other graduates; in addition to these, a profound personal sorrow and humiliation is brought to all the professors of these institutions, those who are more immediately and directly concerned with their management and methods. We should let the reputation of our Eclectic colleges, their traditions, their history, and their teachings be an ever present inspiration to keep us true to honorable and professional lives.

I feel deeply grateful to our Ladies' Auxiliary for their interest shown in this session of our Association. It is not difficult to apprehend the immense good, moral and intellectual, which will fall to the share of the Association from the aid and influence of the mothers, wives and daughters of Eclectic physicians. They are, or should be, interested in all that pertains to the present and future of those who favor the true, progressive and liberal principles incorporated in the fundamental doctrine of Eclecticism. With women interesting themselves in upbuilding and sustaining true Eclecticism, who can determine the manifold advantages and benefits which may accrue? This union of talent and vocation, having one work in common to accomplish, will give this movement an impulse which will rapidly aid its development and insure its ultimate success.

The fallible judgment of society is learning that it cannot

confine the intellectual activity of women, nor restrict her field of action where ever her coöperation is needed. Nature has endowed her with supereminent gifts as well as a sacred influence. In a lengthened eulogy upon her, says Holy Writ: "Who shall find a valiant woman? As things brought from afar and from the uttermost coasts is the pride of her." Therefore woman is reverenced for her heroic, as well as for her gentle virtues; for her valor, courage, self-reliance, and strength of mind and purpose; as for her grace of personality. George W. Curtis says: "The test of civilization is the estimate of woman."

The history of woman in pagan countries is but a record of bondage and degradation. Socrates' daily prayer to the gods was a thanksgiving that he was born neither a slave nor a woman. Even as late as the eighteenth century she was mentioned as "below men and above children." The great exponents of that age were hostile to the development of woman; blind to their true qualities and averse to their domestic and political emancipation.

In that enlightened age the epitomized idea of woman was—that to man alone belonged reason and strength, while woman must have no further ascendancy than those graces wherewith to please man. But the moving world prefers ideals in place of the idea; the concrete model, in the place of the abstract principle. It remained for the nineteenth century to yield willing homage at the shrine of woman's intellect and genius, as is proven by her present acknowledged and honored status. But yesterday her's was a circumscribed sphere, beyond which she dare not venture without incurring odium and ostracism. Today we uphold her, not only the refined queen of the domestic kingdom, but dignifying all places and capacities; filling creditably high and honored positions, emulating her brothers, and sharing with them the rewards of intellectual toil and success. Slowly, silently, the laws of evolution have operated until woman's influence and opportunities are commensurate with her attainments and ability.

To our national pride be it said, that chivalrous America, ever loyal to her devotion to women, wears in enduring bronze the significant trophy—the embodiment of ideal Liberty—which is the graceful form of woman bearing aloft the emblematic torch.

Fellow Eclectics: As before stated, we have met for the purpose of interchanging views upon medical subjects. We have met not for selfish motives, but hope, by mingling together and

counseling one with another, to be better prepared to practice our profession. The hour hand on the dial of medical research points to the necessity of thorough investigation, and reminds us that we have come together for the purpose of improvement. May your deliberations be of such character as to unfold to the world such evidences of principle as will stand as living monuments of your devotion to the grandest system of medicine—the American system. Our system is analytic as opposed to synthetic, and I trust that in your consideration of medical subjects your reasoning will be along this line.

We have seven medical colleges that are well equipped and that are recognized by this National Association; active medical societies in thirty of the states and territories; and it is but justice to these institutions that we be deliberative, scientific and liberal in our discussions before this national body.

In conclusion, I desire to thank the officers of the different sections for their support and assistance in accomplishing the purposes of this meeting, and the membership for their individual interest. May your efforts to make this meeting a success redound to the good of the medical profession and the elevation of Eclecticism.

ADDRESS.

MRS. E. LEE STANDLEE, PRESIDENT OF THE LADIES' AUXILIARY OF THE NATIONAL ECLECTIC MEDICAL ASSOCIATION.

Mr. Chairman, Ladies and Gentlemen:

I have been called upon to represent here to-night the Ladies' Auxiliary of the National Eclectic Medical Association, and in their behalf I extend to you, one and all, a kindly greeting and a hearty welcome to this beautiful city by the lake. We hope you will spend your time pleasantly and profitably among us during the session of 1902, and after returning to your homes, whether you have come from beyond the Rockies' towering peaks, or from the sweet, sunny South and the land of flowers, or from the shores of the Atlantic, where you can hear the old ocean, in its ceaseless commotion, rolling on, ever on, or from among the cool, refreshing waters of the Red River of the North, you will all feel many times repaid for your trip and remember with pleasure the National meeting at Milwaukee.

Our Ladies' Auxiliary was organized June 20th, 1901. It is, therefore, in its infancy, and will in all probability feel the need of paternal care for some time to come. The object of this organization is to increase the social feature of the National meetings by bringing the members, especially the ladies, into a closer relationship, thereby making all present each year feel welcome, assist in furnishing entertainment for the meetings, increase the attendance, and in every way possible promote the general interest and welfare of the National Eclectic Medical Association at its annual sessions. We have felt the need of an organization of this kind for some time, in order that we may get better acquainted, and as we meet year after year, our lives having so much in common, we hope to make our gatherings more like a great family reunion. Working in the society, we will come in closer contact with each other and in this way make new acquaintances from time to time, and form lasting friendships which may be of mutual benefit to us throughout life. "Happy is the house that shelters a friend." We can all agree with Cicero when he says: "They seem to take away the sun from the world who withdraw friendship from life; for we have received nothing better from the immortal gods, nothing more delightful."

The officers of our society consist of a President, First, Second and Third Vice Presidents, Secretary, and Treasurer. Those eligible to membership are the wives, daughters, mothers and sisters of the members of the National Eclectic Medical Association, and the lady physicians who are members of the National.

The gavel used at our meetings was obtained on the summit of historic and beautiful Lookout Mountain, and presented to the society by our Secretary, Dr. Ethyl H. Richardson. We hope to preserve this gavel as a memento of the birthplace of the Ladies' Auxiliary of the National Eclectic Medical Association, and hand it down to the presiding officer from time to time, with a hope that each succeeding year will add new laurels and fame to our society. In order that this result may be accomplished we must have united action on the part of all, and taking for our motto, "Onward and Upward," we can advance little by little, year after year, until the zenith of our hopes is attained—a state society and a Ladies' Auxiliary in every state in the Union.

"Rise and labor.
Doubt and idleness are death,
Shape thee out a goodly vessel
With the strong hand of thy faith."

It will require perseverence and constant vigilance, and with these well developed, our success is assured. Our hopes can easily be realized if every member will do her part. In the words of Goethe we would say, "Like a star, without haste, without rest, let every one fulfill his own behest."

We hope that in the coming year a large number of auxiliaries in the states will be organized, and thus the national body will be strengthened very materially.

We have a few rules which have been outlined for the "good of the order."

With a vivid recollection of the entrance to the great Auditorium at Chattanooga, where the last meeting of the National was held, we have decided that each year one member shall be delegated to arm herself with an oil can in good working trim, to be used in the treatment of squeaking doors, thus preventing a few cases of nervous prostration on the part of those attempting to hear a speaker or the reading of a paper. This precaution should not be necessary where so many first class physicians are within easy call, but as a shoemaker's wife usually goes barefooted, and a physician makes his money by giving his medicine and not by taking it, we think it advisable for the good of suffering humanity to be ready to administer the dose at the proper time and place.

Also each member is expected to wear but one chapeau, and if perchance she should be on her way to a summer resort, the extra headgear shall remain in her "Saratoga," and not appear to delight the heart of the wearer and to be watched with longing and admiring eyes by the sister who has obeyed the instruction of the society by leaving her other hat at home.

We shall insist that every member be treated white, so that none will act green, or feel blue, while the National is "painting the town red."

We would feel very much discouraged in attempting to carry on an organization of this kind if we believed that many agreed with St. Chrysostom's definition of a woman, which is as follows: "A necessary evil, a natural temptation, a desirable calamity, a domestic peril, a deadly fascination, and a painted ill." But we feel that no one under the Christian influence and enlightenment of the twentieth century who has ever loved mother, or wife, or daughter, or sister, can read this description without astonishment and pity. We believe that at the present time, more than at any other time in the history of the world, woman's hand and brain

are a necessity in the affairs of human life. While her utility might be questioned as a professional necessity in some of the professions, yet new plans of usefulness are constantly being opened for her, and the value of woman's work in her sphere is unquestioned. What would the sick room or the hospital be without her gentle, comforting touch and words of cheer?

Most societies and organizations are coming more and more to realize the value of woman's work and influence, and we trust that the work of the Ladies' Auxiliary in connection with the National Eclectic Medical Association will be of such character that we shall become to it a vital and lasting necessity and that we may recognize our work to be incomplete until we have realized the thought expressed in the following lines:

"Rest not! Life is sweeping by;
Go and dare before you die.
Something mighty and sublime
Leave behind to conquer time."

THE IMMEDIATE DEMAND FOR A PERFECT ORGANIZATION OF THE ECLECTIC PHYSICIANS OF AMERICA.

An Address Embodying the Secretary's Annual Report.

FINLEY ELLINGWOOD, M. D. SECRETARY, CHICAGO, ILLINOIS.

To the Members of the National Eclectic Medical Association.

The year of my service as your Secretary having passed I take pleasure in reporting that to me it has been one of pleasant duties. Receiving early from my predecessor, Dr. Howes, the report of the last session, and having limited time only at my disposal, I edited and published the annual volume of the Transactions, and had the books ready to distribute to the members on the 25th day of September, 1901, following the June meeting. Following a suggestion of Dr. Howes in his report of last year, that the secretaries of the state societies could coöperate to a valuable extent with the secretary of the National in building up the cause of Eclecticism, I wrote to these secretaries early in the year, asking their opinions as to the advisability of calling a meeting of all the secretaries, to be held one evening during this session of the National, to discuss the feasibility of a permanent

organization, and to talk over the best means of coöperation for the good of the cause. The responses were so hearty and so unanimous—in fact, so urgent—that I called such a meeting, which will be held this evening.

In entering upon the duties of the office of secretary of this association I was impressed with the belief that a larger duty devolved upon me during my term of office than simply that of editing the Transactions for publication, assisting the president in developing enthusiasm for another meeting, and reporting the transactions of that session. I have always felt that the officers of this National Association were the central—pivotal—influence around which the interests of Eclecticism clustered. I have felt that, as for me, it was my duty to inform myself concerning the character, standing, development and advancement of Eclecticism, and to do everything in my power to help the cause onward to a higher ground during my brief term—if possible to have something of advancement to show for my one year's work. With this idea in view I began a correspondence with those whom I knew to be interested in Eclecticism, and those who had been appointed on the committee of status, to determine to what extent Eclecticism in the United States was organized.

I have always observed that without organization any body is essentially weak, and that the strength of a body—its ability to do effective work—is in proportion to the perfection of its organization. This point I made very strong in the preface to the first Annual of Eclectic Medicine and Surgery, which I published in 1890. The results of this correspondence was, in some cases, to me very astonishing. Many of the men to whom I wrote, in states where there was no society, wrote me, without attaching blame to the officers of this Association, that they did not know that the National Eclectic Medical Association felt any interest in them. They felt that they were cut off from the body of Eclectics; that being isolated from others of our school, and being brought into immediate contact with those of other schools —although they practiced Eclecticism, and could not succeed without it—that they had ceased to call themselves Eclectics. And when I asked these parties to interest themselves in forming the Eclectics in their state into a society, some of them claimed that they could not do it on account of their affiliation with the other schools.

I found farther that in many localities where we supposed Eclecticism was strong, there were not enough Eclectics to form

a society. I found, also, that in several states there were enough Eclectics, but the spirit of Eclecticism was low, and that so much outside influence was exercised against them that they had not interest enough in the cause to assist in forming a society. In several states where there had once been a society, interest had flagged until the society had become disorganized. In one state those who had previously exercised a strong influence toward sustaining a society had left the state and no others had taken their place.

When I was at the Texas state meeting at Houston, in October last, I talked this matter over thoroughly with our president. We both resolved to undertake immediately to interest the leading Eclectics in these states in organization and reorganization. The president has worked unceasingly and has kept up an extensive correspondence. I have been pleased and flattered at the interest taken in the efforts that I have made. I met with immediate coöperation in those states where organization seemed possible, from those whom I had asked to undertake the work, and before the first of January, 1902, plans were laid to organize or reorganize five or six state societies. I have now to report the organization of three new state societies, one in Florida, one in South Dakota, and one in Oklahoma, each established on a good working basis with a strong working force and an excellent spirit. The societies of Kentucky and West Virginia have been reorganized, with excellent prospects for the future. There are a few states in which the societies are weak, and greatly need the encouragement and support of the National. Among these are those of Colorado, Washington, and Oregon. In Nevada, Wyoming, Montana, North Dakota, Utah, Arizona, New Mexico, and Indian Territory, in the West, and New Hampshire, Virginia, North and South Carolina, Alabama, and Mississippi, in the East and South, there is no organization, and some of these have not enough Eclectics who call themselves Eclectics to form a state society.

In these states it is necessary that the National take a direct interest in the individual Eclectics until each feels his personal obligation to our cause, and realizes that he himself can do much toward building up a strong spirit of Eclecticism in his state. I have written once or twice to the Eclectics in these states whose addresses I could secure, and have sent each a blank application for membership and asked each to join the National directly this year.

There are immediate reasons, important and vital reasons,

why every man who ever graduated in an Eclectic institution should at once acknowledge in some manner his allegiance to the Eclectic body.

Nothing in connection with our interests as an individual school of medicine has ever impressed itself more forcibly upon my mind—has ever taken so deep a hold on me as the fact that the issue before Eclectics to-day of vital importance is the organization of Eclectics in the United States.

We have reason to believe that there are 12,000 men in the United States who are practicing the principles of Eclecticism. Not 4 per cent of these are members of this Association; not 15 per cent are members of any society, and not 60 per cent are even registered as Eclectics. Many of these individual physicians have lost the Eclectic spirit. They have allowed themselves to become permeated with the ideas of other schools. They have failed to remain firm and staunch to the cause.

As an evidence of this, Polk's Medical Directory, depending upon the statement of each individual doctor as to what school he belongs, registers less than 4,500 physicians who are willing to be called Eclectics. The remaining 8,000 are registered as belonging to other schools, or their school is not named. In many cases the capital letter "R" appears after the name, and yet the only school of graduation named is Eclectic. The official register of the State Board of Health of the State of Illinois, just completed, which registers physicians from their diplomas, and not from their own statement, registers 1,250 Eclectics in the state. Polk's Directory registers 569. That looks as if half of the Eclectics of the state of Illinois were practicing under false colors. In Ohio, I am told, there are between 800 and 900 Eclectic physicians, and Polk's Directory registers 566. These facts are about the same throughout all the states, and I have gone over the state lists carefully.

It devolves upon us now, at once, gentlemen, to decide upon some course which shall attract these physicians to Eclecticism, and hold them together as a willing, consolidated, enthusiastic working body. Those that leave us in many cases are not leaving us because they really desire it, but because we have not offered them the strong organization with which they should affiliate, and of which they could feel the prestige and influence. I believe that it is the duty of this Association to take this matter into earnest and serious consideration as never before. This work should have been done years ago.

The issue to-day presents itself as a most serious one. There never was a time, gentlemen, when the Old School was so determined, so bent upon absorbing the other schools of medicine as now. They have given this matter consideration in their societies, and they are determined to secure the deflection of enough individual Eclectics to force us into disbanding as a working body, to give up the name of "Eclectic" entirely. In common phrase, gentlemen, we are now "up against" the most serious proposition in this matter that has ever presented itself to us. The most of you have not been in a position to learn the full force of it. And many of you will be inclined to treat my presentation of it as of but little importance.

The American Medical Association as a body asks our men to join them , and says that if we present the credentials that admit us to our state societies, they will admit us to theirs. The door is wide open. There are not a dozen men within the sound of my voice to-day that could not join the American Medical Association if they chose. Nearly every regular state society makes our doctors the same proposition. This action is almost simultaneous among them all over the United States. It was started last year, and before 1902 ends there will be but few state societies that have not done it. Our danger lies in the fact that they do not expect us to come in as a body of physicians. The proposition has not been made to this National Eclectic Medical Association, or to any state society, or to any medical college faculty, but they are at work on the individuals, separated, isolated, susceptible to a certain degree of flattery, by an insiduous influence, impossible for us to meet except by perfect organization; they are persuading one man at a time to come into their ranks, and I am assured that very many have joined and that many others are giving the matter favorable consideration.

Since January the medical journals are teeming with editorials, enthusiastic, upon the subject. They call it "their beneficent assimilation." They are positive of results. *The New York Medical Times* for June has an article entitled "The Coming Unification." Does not that have a positive tone? The editor states that the "auspicious era has begun," "and coöperation is no longer a theory, but a condition." If it were coöperation, I would never raise my voice against it. But it is not coöperation they desire; it is annihilation. He refers to the address of Dr. Read, of Ohio, who says: "Sects have always arisen around a central idea. The sect has met a varying fortune, and ultimately passes away,

while the central idea, if true, is absorbed into the great body of medical learning." Is there any doubt in your mind of their intention?

They believe that our sect will pass away, and that they will absorb all our essential truths. Again quoting the journal previously referred to, the editor says: "There is a demand in this country for the broad-minded and liberal physician, who can accept the truth no matter from what source it is derived." No greater truth was ever stated. Where was there ever a better definition of Eclecticism? Have we not told you time and again that there was a demand for our principles—for the great truths of our practice? Have you not met that demand yourself? Have we not iterated and reiterated it in all our publications? From whence first came this demand? Was the Allopathic profession the first to demand these principles? No, sir! It was the people. Did it grow out of their own overwhelming desire to benefit humanity? No, indeed. The people first demanded these truths. If it had not been for the people the Allopathic profession would not have demanded them for a thousand years. They would have wrapped themselves in their time honored garment of self-sufficiency, and they would not have demanded them until millenium's dawn. The people learned of the success of the methods of other schools. They left the Old School physicians for them, and because they were left and had to get back their patronage, the Allopaths have had to appear to qualify themselves with the principles that the people demanded, so that the people could get these principles from them, and not from the irregular physicians. Yes, the people have forced this demand upon the dominant school, and now, perforce, they come and offer us a fraternal affiliation if we will give them the gold and gems of truth which we have toiled all these years to secure, toiled under their constant disapproval, toiled with their slights, sneers, inuendoes—so that they can retain their dignity, as the great profession.

Gentlemen, words fail me to express my contempt for such a course, or for the Eclectic physicians who, knowing the situation, will entertain for a moment such a contemptible proposition of affiliation. I am confident that I can read between the lines in this proposition, and instead of friendly fraternal coöperation, I read the startling words, obliteration, annihilation! That is their intention.

I never was in sympathy with trusts, and I am especially antagonistic to a medical trust. I am opposed to mergers, and I

am especially opposed to a merger in which the entire controlling stock would be placed in the hands of a single one of the merging bodies—in which the value of that stock would be most materially enhanced by that contributed by the other mergers, with no possible profit to them, and no future prospects except annihilation.

Let us read what others of their journals say. *The Buffalo Medical Journal* for May, as well as *The Medical Critic,* says: "There is no reason why any physician should be required to renounce the title of "Eclectic" or "Homœopathic" that they may be with us. The only test being that they are physicians in good standing." That is another trap. *The Cleveland Medical Journal* says of this course: "It is a little too soon for this, perhaps, but it is in the air. Speed the day; only in this way may sectarianism in medicine be finally buried." Listen to the subtlety of that statement. The editor further, as a proof of what I have just stated, that they are working to secure the individuals separately, says: "There are established personal and professional relations that must undergo a process of adjustment before the individual irregular feels at liberty to join us. But these restraints will all give way more speedily than any of us now imagine." We must see to it, Brother Eclectics, that the adjustment of these personal and professional relations is toward the consolidation of Eclecticism, and not toward its dismemberment.

Let me read you some farther important admissions the Allopaths are making. Dr. Geo. M. Gould, of Philadelphia, is the editor of *American Medicine,* a new and widely advertised medical journal of that school. In an editorial review of Dr. Alex. Wilder's History of Medicine the editor says: "The platform of principles enunciated at the third annual meeting of the National Eclectic Medical Society, held in Rochester in May 1852, though at that time regarded by orthodox physicians as an expression of revolt and heresy, would to-day be approved by every progressive medical man." Fifty years after they are approved. In other words, they acknowledge that they are fifty years behind us in this. It is also worthy of note that the editor says that at the sixth annual meeting of that body, in 1855, was passed the first act of a general body of physicians to sanction the instruction of women in medicine. Further, "This is a history of reform movement which, though successful in the attainment of its chief contention, has been denied of credit by the general profession and whose followers still attempt to keep up a fight on a field already won." "The principles for what these reformers fought were

long since conceded." By whom, I should like to know? No concession to us has ever been openly declared. But in order to strengthen their present condition they are forced to claim it. Is the battle already won? Not until they make open general acknowledgments and adopt, with full credit to us, the practice of our systematic methods. Then we may work with them in the true fraternal spirit of coöperation for the advancement of our profession in therapeutics.

They have concluded that they can accomplish a great deal more by being friendly than by being antagonistic, and as a result our men are caught in this snare. A prominent Chicago physician has stated the matter as follows: "We have fought them for years, but have availed nothing. But when we offer them friendship, the regular lion and the irregular lamb will lie down together, and when they arise the lion will have waxed fat and the lamb will have disappeared." Is that coöperation? Is that friendly affiliation? I can see nothing in that but annihilation.

In order to effect our annihilation more rapidly they are adopting yet another, and to us more dangerous, course. The Old School doctors in Ohio, New York, Illinois and other states are forming union societies. These, apparently friendly and harmless, are springing into existence rapidly. After a few sessions, and in strict compliance with the provisions of their new plan of reorganization, these societies become affiliated with the Regular state medical society, and then are a part of the whole, and the members are all Allopaths.

What shall we do, gentlemen, to avoid this intended obliteration? To avoid the snares that are set for our unthinking ones? I say it in one word, as I have said it before—Organize. We as a body have paid too little attention to organization. As I think of it now, I am ashamed that we have done so. We have not dwelt upon the importance of it among ourselves. We have not instilled it into the minds of the students in our colleges. We have been lethargic and have allowed each man to drift for himself, and we are now reaping what we have sown.

If you read the history of the Roman invasion of Britain in the first century after Christ, you know that because the native Britons fought each alone they were invariably defeated. In one of their battles the Romans captured a boy, the son of one of the British chieftains, and kept him as a hostage. He lived with the Romans several years, and educated himself thoroughly in their method of warfare. Upon his release he went home,

called his father's men around him, told them that he had discovered the secret of the Romans' success and their own constant failure, and he drilled them in the Roman methods. In a great battle he won a decisive victory and drove the Romans back by their own tactics. He had learned that they fought as a single man. Look at the history of Scotland. They retained their freedom for a dozen of centuries because they fought England together, as a unit. We must do that, and we must do it now. Our only hope is organization. We must employ their own methods against them. They were never organized as they are now, and it is because of this perfected organization that the issue against the Eclectics and the Homœopaths is simultaneous in all the states with all their societies. Unless we unite and resist as a single body we will be overwhelmed. We must "outgeneral" them. In Illinois they have an effectual working body, a society in every county. Their plan is now that every member of the county societies is to be registered as a member of the state society, and every member of the state society by virtue of his office becomes a member of the American Medical Association. One fee pays for it all, and each member gets every week a copy of *The Journal of the American Medical Association.* This is soon to be effected in all the states. If it does not bring the mass of the Allopathic profession into the great body of the association, the next move will be to reduce the annual fee to a nominal sum, and then they expect every Allopathic doctor to pay that amount regularly. Every man will be one of the whole. All will work together, and each pay tribute for the support of the whole.

We are almost alone in imperfect organization. The Homœopathists have the same number of physicians that we have, but they are all Homœos. With our 12,000 men we have only 450 members of this national organization, while they have 2,300 in the American Institute of Homœopathy. Twelve per cent of our men are in our societies. Their society includes at least 60 per cent. They have prestige in almost every state and municipal government, and they laugh to scorn the idea of Allopathic absorption. They have but little fear, and yet they see the danger. They are confident in the power of their own united forces; and yet their editors are insisting upon much more perfect organization. They express not too much confidence.

The June *Homœopathic Visitor* says: "The great need of the hour for the members of the Homœopathic profession is to organ-

ize, and to keep their organization intact, for the time has arrived, in the opinion of the Old School, for suggestions of coöperation, which while, apparently friendly to our cause, will greatly retard our growth if it does not entirely destroy us."

Now, what shall we do in order to organize more effectually, more compactly? The Illinois state society last month appointed an officer, whose expenses are paid by the society, whose duty it is to unite the Eclectics of the state of Illinois without regard to membership in the state society, into a solid body. He will correspond with every one individually until they have sent him a signed application for registration as of the Eclectic body of the state. He sends them a certificate of membership, keeps in touch with them, knows of their removals or deaths, and informs them on matters of common interest, without expense to them. Ultimately this body will be made a part of the state organization. This is an enormous undertaking, but it is no less than every state must do, and over this work the National must exercise a paternal watchfulness. We must in this manner antagonize the inclination on the part of the Old School to annihilate us. We must retain our identity and increase our strength as a working body. If we are not willing to do the work necessary for this we had better yield at once. We have existed in spite of their opposition and have grown strong, until now they acknowledge our merit. Now is the time of all times when we should pursue a policy of complete, magnificent isolation.

What have we done, or what have we now, that they should so earnestly desire it?

If we had done nothing of value, nothing that in itself possessed intrinsic merit, they would not want us. If we had nothing peculiar or essential, they would not need us. They realize the wealth of truth that we have given to the profession, but they must have it, without acknowledging that it came from irregular sources.

We have developed a principle of practice exact and reliable. We have adapted single drugs in an exact, systematic manner, in accordance with this principle to the correction and cure of exact conditions of disease. We have studied the action of three hundred remedies until we have given them an exact place in therapeutics, a place so consistent with their inherent properties, so consistent with physiological and pathological action that they cannot be displaced. We have developed a knowledge of single remedies which have at once taken the highest position

in therapeutics and have met with general adoption and general recognition as eminently superior to others of their class. All this in accordance with an exact rational principle. And this truth has been amalgamated into a systematic and rounded whole, a definite and highly consistent method of practical therapeutics.

They, too, have advanced in therapeutics. They have learned that which we declared at first, that blood letting and harsh methods are not consistent. They have learned of animal extracts, of toxins and antitoxins. They have given to the profession 350 synthetic remedies and have subsequently discarded 325 of them as not reliable. They have introduced a few new organic remedies and have developed a knowledge of a few previously known inorganic remedies. All, however, along empirical lines, and not, with the exception of the antitoxins and animal extracts, in accordance with an exact principle or in consistent, rational lines. Their pharmacists have made combinations for general conditions and have flooded the profession with heterogeneous compounds which in no way conduce to an exact knowledge of drug action upon exact pathologic conditions.

Their course is so widely divergent from ours that there is but little relationship between them and us now.

In us there is to-day, as there has been for the past seventy-five years, the spirit of investigation. Shall we yield our birthright for a mess of pottage? Shall we go back to the leeks and onions of Egypt? Shall we allow ourselves to be wiped out of existence by their numerical superiority?

Is it a little thing that we have done for the profession and for humanity that we should give it up to the mass of the profession for them to be accredited with and to be praised for, after they have remained in therapeutic darkness for centuries? Is it a little thing to have added some of the most important vital truths that the profession has ever known to the fund of general knowledge in the cure of disease? There is no knowledge ever determined that is of greater importance. No discovery has ever been made that is of more value. There is no invention in science or art or mechanics that will compare with it. What are the discoveries of Watts, or Fulton, or Morse, or Bell, or Erickson, or Edison, or of Stephenson or Tesla, or Marconi by the side of those—of those patient plodders who have placed in the hands of the greatest profession a knowledge of an exact principle of drug action, a knowledge of that which will certainly

relieve pain, which will certainly give to life a prolonged existence, which will rob an anxious mother of her dread, and will bring back loved ones from impending death? Is this a little thing? All this and more have the Eclectic physicians of America given to the profession, and shall we yield our right to this great honor without a protest? I say to you, no. My brother physicians, a thousand times, No!

If we consent to annihilation, gentlemen; if we do yield; if we allow ourselves to be despoiled of our rights; if we meekly succumb to the demands of the dominant school, what will be the result? Will the work that we have commenced yet go on? I trow not. Will they continue to investigate in the same systematic lines, governed by the same exact principles that we have? No, sir. The work will stop forever, right there. When they have swallowed us up, advancement along these lines will forever cease. Suppose they had made this proposition to the schools in 1858 and it had been accepted, when John M. Scudder and John King began their work. What, think you, would there be to-day to show for the work that has been done since in our school, and the influence of that work? Would it stand out distinctly as it does now, as having markedly and pronouncedly influenced the medical thought of the world? I tell you, Nay!

No, gentlemen, the hope of advancement in our peculiar therapeutic lines lies in our remaining intact as an enthusiastic working body, in our retaining our distinctive principles and our pride as a school.

If we yield we will lose the stimulus of the pride we have in the work. We will be paralyzed and stagnated by the irregular and unsystematic method of therapeutic study they have always followed, just as our young doctors have been who have gone early to the Old School colleges and obtained regular diplomas. We will be poisoned to the death with the noxious toxins of their inherent therapeutic nihilism.

And now, gentlemen, I offer as a suggestion to this Association, that we resist all propositions of affiliation with the Old School which contemplate annihilation instead of coöperation, and that we act at once upon this matter of organization; that we indicate to each state society a course similar to that one adopted by Illinois, unless something better is suggested; that we assume a personal supervision over the interests of the Eclectics in every state; that we devote energy and time to this matter without stint; and that we urge the work for immediate execution, as there is

not time for a moment's delay. Every state must feel the strong arm of this National Association, encouraging it and urging it on during the coming year. We must work at once or never. And further I would suggest that this association send an enthusiastic representative to the state society in every state during this coming year to present this matter as it is, to assure the National support and encouragement to help each on to a perfect organization. Furthermore, the hour has come when the exigencies of the times force us to be radical, and as well as being perfectly organized, we must advertise our methods more. We have been too silent in the past. There is now such a demand for our principles that to declare that we are Eclectics is an honor. I believe that every doctor's card, and all his stationary, should have the word "Eclectic" upon it; that every one of our medical journals should have the word "Eclectic" in its name. I am going to petition the trustees in December to change the name of *The Chicago Medical Times* so as to get the word Eclectic in it. And if I had realized three years ago where we were drifting I could not have allowed a copy of my Materia Medica and Therapeutics to be sold without the word Eclectic in its title, notwithstanding Electicism is conspicuous on its every page. I believe that every college pretending to teach Eclecticism should be compelled by the National Federation of Eclectic Medical Colleges to have the word Eclectic in its name, and not be allowed to have on its faculty a single physician from the outside schools. We must be ultra exclusive, and with courage and bravery, and with confidence and self-assertion, we must unitedly resist as we have never resisted before the danger which threatens to engulf us.

You have read of Xerxes and his army of millions in the conquest of Greece. You have read of the band of Spartans in the defile of the mountains that withstood the whole army. Gentlemen, this is our Thermopylæ. Is the spirit of Beech, or Morrow, or King, or Scudder dead? Is the Eclectic spirit of justice and right frozen in our veins that we should yield to such contemptible suggestions? No! Let resistance characterize our every action. Let the consciousness of having right on our side stimulate us to such combined and systematic effort that there shall be no doubt of our success. And for this result, I said to you at first, organize. Secondly, I said organize; and thirdly and finally, if the spirit of Eclecticism is upon you, if you are proud of the work of Eclecticism in the past, if you have any desire to preserve its integrity in the future, if you believe in it, if you

believe it to be our sincere duty to humanity to perpetuate its principles, to continue the work that has been done, I say to you, organize, organize, organize!

PRIZE ESSAY.

Awarded First Prize of $100.00 in the Annual Competition.

SPECIFIC MEDICATION, A DISTINCTIVE FEATURE OF THE ECLECTIC SYSTEM OF PRACTICE.

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Every system of medicine, whether it be Allopathic, Homœopathic or Eclectic, has some distinctive features, by which we may distinguish it from other systems.

The Allopathic theory, "that a remedy to be efficacious must produce a morbid state in the body different from the one already existing," is probably one of the oldest theories extant, and for generations remained the almost undisputed theory of the medical world. Based upon this theory rests much of the harsh treatment of former times. Disease was considered an entity to be removed only by forceful measures. With this end in view, the practice consisted mostly of blood-letting, blistering, tartar-emetic and calomel to salivation. The treatment was unpleasant and the results far from satisfactory. As early as 1780, Samuel Hahnemann, a "Regular" physician of his day, while working on Cullen's Materia Medica, was struck by the contradictory accounts given of the properties of Peruvian bark. He had previously meditated on the unsatisfactory condition of the science of medicine of his day, and, after much reflection and experimentation, he evolved the doctrine of Homœopathy—"that the cure of disease is brought about by the very drug that would in a healthy person produce symptoms of such disease." He also was convinced, by further investigation, that it was unnecessary to administer the conventional doses, which were often dangerous, but that better results could be obtained by giving the remedies in small quantities. It is said that he spent the remainder of his life in the promulgation of the principles he advocated; and there is no denying the fact that they contain many valuable truths which have made their impress upon medical thought.

We would not for one moment attempt to detract from the many valuable truths which have emanated from other schools of medicine than our own. All honor to Wood, Shoemaker and Bartholow; their studies and researches in the line of therapeutics have been of inestimable value to the medical world.

The doctrine of Specific Medication as first promulgated by Rau consisted "in picking out the particles of truth in whatever system we may find them and by means of the specific principle arrange them into one harmonious whole." This has been the general aim of the promotors of the Eclectic system of practice. And while we have selected from every available source whatever we considered of value, we have made our selection after our own investigations had proven them correct. We have oftimes found new qualities in the drug or have obtained better results by giving the agent in modified quantities. Our aim has been to eliminate superfluities, rectify fallacies and elucidate truths in the line of our investigations. We have tried to work in harmony with the laws of logic and philosophy, basing our system of specific therapeutics on the unvariable law of "cause and effect."

The present system of specific medication has not been the work of a day nor the production of a single individual; but it has been the result of long years of study and investigation by some of our ablest men. The fathers of Eclecticism, in laying the foundation for the future system of practice, enunciated the following fundamental principles, which are in remarkable harmony with our present system of specific medication:

"That the doses of remedies, or the means employed in the treatment of the sick should be non-poisonous; that they should not be capable of doing present harm; that they should not endanger life; nor should they leave future impairment of health." Conversely, "that the remedies and means employed should strengthen life, and should give good convalescence and afterward good health." With these principles as their guide the great progenitors of our system of medicine gave their best efforts.

We hold in reverence the names of Samuel Thomson, Wooster Beach, T. V. Morrow, I. G. Jones, John King, and scores of others who did a large part towards bringing about a reformation in the practice of medicine in the United States. But perhaps the one man above all others who placed the Eclectic practice upon a scientific basis, thereby improving the methods in general use,

was our lamented Dr. J. M. Scudder. His Specific Diagnosis and Specific Medication did more to give us confidence, by establishing a degree of certainty in medicine, than any previous books that had been written. They have also done more, perhaps, to establish the prestige of Eclectic medicine than all other works combined; and to-day, wherever we find the Eclectic physician dispensing his pleasant medicines, the name of Dr. Scudder is to him a delightful memory. Dr. Scudder did not claim perfection in the new system of practice, but he laid down certain principles which he believed would lead to a more rational method of applying remedies to disease. He ever urged study and investigation along the line of Specific Medication, and he lived to see his system become a distinctive feature of Eclecticism.

History shows that at its inception the new practice of medicine consisted rather of reformers—men who opposed the harsh medication in vogue at that time. Bleeding, blistering and mercurial salivation and other harsh and depleting measures constituted the principle armamentarium of Regular practice of that day.

These early reformers in medicine opposed these harsh measures and sought after milder and safer methods of cure. They went forth into the wilderness of nature, believing that they could find therein some plant or shrub containing medicinal properties that would afford relief to the ills of men. In this they were not disappointed, as witness the category of remedies now universally known as peculiar to the Eclectic school of medicine. Among these we may mention Podophyllin, Leptandrin, Phytolacca, Black and Blue Cohosh, Iris, Apocynum, Chionanthus, Asclepias, Hydrastis, Lobelia, Sanguinaria, Cactus, Dioscorea, Euphorbia, Viburnum, Veratrum, Viride, and many others. These form a list of remedies not excelled by any other school of medicine. Instead of using mercurials, the early Eclectics used such remedies as Podophyllin, Leptandrin or Dandelion to accomplish the same results. Instead of Tartar-emetic, they made use of Ipecac, Lobelia or Sanguinaria to accomplish a similar purpose—all harmless plant products, when used properly.

While the earlier methods of treatment by Eclectics were safer and better than the methods in use by the Old School of medicine of that day, they were far from pleasant to the patient. It was not an uncommon thing to give one or two grains of podophyllin at a dose, or a teaspoonful of lobelia. We are glad to know that modern Eclectics, having ascertained the specific

indications for these drugs, get better results with the small, pleasant doses, and instead of giving two grains of podophyllin, they administer the drug to-day in one-tenth grain doses with better results. This is true not only of podophyllin, but of most of the other remedies in use.

We should not lose sight of the fact that pharmacy at an early date in our history was yet in its infancy with regard to plant products, and that the physician was obliged to make use of the drug in a crude state or rely upon such preparations as could be procured at that time. Many of the earlier Eclectics prepared their own tinctures from the recent plant and used them with excellent results. But it was not long until the pharmacist kept pace with the needs of the physician, and the products he has brought forth have been as varied and wonderful as their many therapeutic applications to disease. For without pure, reliable drugs of uniform strength, no system of medicine can reasonably expect a rational system of therapeutics. The Eclectics certainly owe a debt of gratitude to those able pharmacists who have given us a class of remedies of acknowledged reliability, by all schools. I refer to our specific medicines. They stand to-day the equal, if not the superior, of all others.

While our fathers were studying drug action to determine a safer and better method of curing disease, they were laying the foundation of a system of practice based upon rational principles. The knowledge thus obtained by these early investigators aided materially in our study of drug action with reference to specific medication; and we find that through these long years of study and investigation, especially of the vegetable materia medica, the Eclectics have been enabled to effect a revolution in the manner of prescribing drugs for the cure of disease. This great change was brought about largely by means of pure drugs of reliable and uniform strength, when it became an easy matter to make the study of drug action along the line of specific medication. The remedies could be studied singly, and the smallest possible doses required to produce results could be administered.

About seventeen years ago, Dr. John M. Scudder, the Great Apostle of Specific Medication, in writing upon the subject of "The Basis of Rational Medicine," made use of the following language: "I make no profession to the gift of prophecy, but I believe that I can see as clearly and as far as any living man, and I am sure that we are building the practice of medicine on a basis that will last for all time. You may say that this is

assuming a great deal; possibly it is, but I will live long enough to see it recognized by most thoughtful men."

Dr. Scudder did live to see the principles he advocated become the distinctive feature of Eclecticism, and if he were alive to-day, he would find that these principles are now recognized by the most thoughtful men of all schools.

It may be well at this place to give the cardinal principles upon which is builded the system of Specific Medication:

1. "That disease is to be regarded as an impairment of life of the creature. It may be of the structure in and by which he lives, or of the forces that give life; but it is the life that is to be regarded in medicine."

2. "Disease has distinct expressions, as has health; and it may be recognized by him who trains himself to accurate observation. The expression 'language of disease' is not a poetical illusion, but a statement of fact."

3. "There are certain forces in nature, locked up in substances called medicines, which act directly upon the living body, enabling it to resist disease, and aiding in a restoration of normal functions and structure."

4. "The action of such substances has been determined by observation in the past, and is being further known by experiments and observations of the present. Even now our knowledge of the power of drugs is sufficient to enable us to apply them with certainty in a very large number of diseased conditions."

5. "We have proven that special drugs meet special conditions of disease. As these conditions of disease have distinct expressions, and may be recognized by the physician, we say that these disease expressions become drug indications."

6. "Lastly, if these drug indications be followed, the action of remedies will be certain and curative, and the practice of medicine will have a scientific basis, which will insure a continued improvement year by year."

The first proposition, "that disease is an impairment of life, either structural or functional," is, we believe, conceded by the leading medical men of the present day; and that the motto of *vires vitales sustenete* is the safest and best theory on which to build a rational system of practice.

The second proposition, "that disease has distinct expressions, as has health," must be admitted by every fair-minded investigator. Who has not noted the peculiar expressions of joy, sorrow, anger, or shame? We can readily recognize these,

because we have become familiar with their outward manifestations. So with disease; we may be enabled to as easily recognize its outward manifestations if we but educate our senses in this direction. Take the child with the moaning cry, with fever, and tossing its head from side to side, how quickly it speaks to the experienced physician of a serious brain lesion. Let us carry our investigations a little further, and we may note the flushed face, bright eyes, contracted pupils, and they speak to us of irritation of the nerve centers, and we think at once of gelsemium as the indicated remedy. Or, on the other hand, we may note the paleness of the features, bluish appearance of the skin, dilated pupils, tendency to drowsiness, and we at once think of this condition as one of congestion, and prescribe the indicated remedy, belladonna. Or let us take another case, where there is the elongated, pointed tongue, red at tip and edges, white around the mouth, with nausea, and we have a typical case of irritation of the stomach. Here we think of amygdalus or minute doses of ipecac as the indicated remedy. It matter not whether the disease be scarlatina or rheumatism, when these conditions are found we meet them with the remedy indicated.

We might go on enumerating cases indefinitely, but suffice it to say that every disease has its outward manifestations or symptoms, and the study of specific diagnosis teaches us to recognize them, while the study of specific medication teaches us how to meet these indications with the appropriate remedy. When this is accomplished, we have taken a step forward in the line of scientific medication; for a remedy that is found curative under one condition will accomplish the same results under similar conditions.

The third proposition, "That there are certain forces in nature locked up in substances called medicines," we believe will not be denied by any one, especially when given in large quantities. Three grains of podophyllin or sixty grains of ipecac has force. No one will deny this, especially if they have tried it upon themselves. But if we take the one-hundredth of a grain of ipecac or the one-tenth of a grain of podophyllin, there are those who would say "there is nothing in it." However, experience has proven that the most potent medicinal properties lie in the small dose, when the indications for them are present. There are times, of course, when it may be necessary to give ipecac as an emetic or podophyllin as a cathartic, when the larger dose would be required.

Most remedies have a twofold action, a physiological or poisonous action and a specific or therapeutic action. As a rule, it is the latter action which we desire in our treatment of disease. Take for example aconite, gelsemium, belladonna, rhus tox, or nux vomica; all are poisonous when administered in large doses, but when given in the small dose, in accordance with the teachings of specific medication, they become safe and useful remedies.

We may not always understand the mode of action of a remedy, but if we become acquainted with the results and the conditions under which the action is brought about, it is sufficient. No one will deny the power of electricity; yet who can explain the secret of that power. It is a salient force that works unseen. So it is with the action of remedies. We may not be able to explain their method of action. What is far more important is to familiarize ourselves with results, that we may rightly apply our remedies to disease. This knowledge of the properties and uses of remedies has been the results of the collective investigations of the past three-quarters of a century.

The fourth proposition, "That the action of such substances has been determined by observation in the past," is a self-evident fact. While we do not claim perfection in the line of therapeutic science, yet past and present investigators have deduced enough knowledge of the power of drugs to apply them with a reasonable degree of certainty in a large number of diseased conditions.

The fifth proposition, "That special drugs meet special conditions of disease," is the distinctive feature of specific medication and of the Eclectic system of practice. We make our study of specific diagnosis and specific medication with this end in view, and it is principally upon this we base our system of practice. Learning the language of disease and the specific action of drugs, we can apply them in a rational way. The disease expressions or symptoms tell us plainly of some pathological wrong. It may be simply functional or it may be structural in its character. Whatever it may be, we apply the indicated remedy and expect favorable results. If the tongue be of a deep red color, we know there is an excess of alkali; specific medication teaches us to give an acid. On the other hand, if the tongue is coated white, dirty, pasty, and mucous membranes are pale, we know there is an excess of acid, and we give our patient an alkali; perhaps sulphite of sodium. The disease may be typhoid fever, pneumonia, or dysentery; it matters not, we give the indicated

remedy. Thus we learn to prescribe at conditions of disease, not names. We treat the patient, not the disease.

The sixth proposition is, "That if these drug indications be followed, the action of remedies will be certain and curative, and the practice of medicine will have a scientific basis."

This is the claim of modern Eclecticism, and has been amply verified, not by one but by thousands of investigators, who are daily using our specific aconite, gelseminum, rhus tox, belladonna, bryonia, phytolacca, macrotys and others, according to their well known specific indications, and have not been disappointed with general results. When we have once learned the action of a remedy, and how and when to apply it, we have taken a step in the line of scientific medication.

We do not yet claim perfection along the line of specific therapeutics, but we are proud of what has been accomplished, and we believe the day is not far distant, yea, it is almost here, when physicians of all schools will see the wisdom of this method of practice and adopt it as the most rational system of therapeutics. But a few years since, a noted professor in a Regular medical college, in his opening address to the class made use of the following language: "The therapy of disease is now, then, directed to the prevention, removal or destruction of its cause. Such treatment is known, in distinction from the expectant or symptomatic treatment, as 'specific.' It is more direct and immediate in its aim. When it shall have become entirely established, should that day ever be, the practice of medicine will take its place among the sciences which are called exact." When the noted doctor made use of the above language he must have seen the need of some degree of certainty in the application of remedies to disease, and we are pleased to know he predicted it along the line of specific medication.

But recently one of the leading Old School medical journals of the East had this to say in an editorial: "We are mending our practice, so that every such patient is now advised and treated according to any one or more of the hundred special and personal conditions existing."

This has been the doctrine as taught by the Eclectic school of medicine for the past third of a century. It is in accord with the doctrines of specific medication and is distinctively Eclectic. We study remedies to meet certain specific conditions. Hence, nomenclature is of only secondary importance in our treatment of disease.

Eclectics have made a study of drug action with this end in view, and have been enabled to produce a Materia Medica which to-day is unrivaled by that of any other school of medicine. It is rich in remedies from the vegetable kingdom, most of which have emanated from its own researches and investigations. It has carried its researches throughout the mineral kingdom also, being governed by the same law of selection that we used in our researches in the vegetable kingdom.

As a system of rational therapeutics, specific medication stands to-day unrivaled by any other system. It is promoted by a school of medicine born on American soil and is the glory and triumph of the Eclectic system of practice.

We are willing to concede that much valuable therapeutic knowledge has been evolved from the standpoint of Allopathy, likewise; the same may be said of Homœopathy, Hydropathy or the Biochemic theory. Our knowledge of specific medication may be derived from the investigations along one or more of these theories. We accept truth wherever found. Under the searchlight of our own investigations we seek the good and discard the worthless.

Dr. Dunglinson says: "Every judicious physician must be an Eclectic, in the sense that he selects from every source the best means of controlling disease."

Dr. Shoemaker, in his Materia Medica says: "That an Eclectic is one that confines himself to vegetable drugs." In this he is mistaken. Modern Eclectics employ remedies from the mineral, vegetable and animal kingdoms. While we look with especial favor on the oriental expression that "the leaves of the trees are for the healing of the nations," we are not averse to using such means and methods as will benefit our patients, whether they be derived from the mineral, animal or vegetable kingdoms. If we wish to employ the mineral acids or the iodide of potassium, we have the distinct specific indications for them as plainly as we do for aconite, rhus tox, belladonna or gelseminum.

Whatever class of remedies we employ, we use the same standard of selection—that of meeting the special condition of disease with the indicated remedy. We also aim to use the least amount of the remedy ascertained experimentally that is required to accomplish a curative purpose. By so doing we obviate the dangers arising from using too much medicine. On the other hand, our methods are rational, in contradistinction to those who

prescribe too little. We assume the golden mean; we aim to be guilty neither of the sins of omission nor of commission.

We believe that the "small dose of pleasant medicine for direct effect" is the coming system of practice. A system that looks to the kindly action of remedies, and believes in the curative powers of nature, is destined to succeed. We are proud to claim such a system; yet there is much room for progress.

We of to-day owe it to ourselves and the school of medicine we represent to give this subject our best thought and to persistently continue our investigations, that its future may be as brilliant as its past.

THE REAL CURING OF THE SICK.

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There is a significance in words which in the hurry and bustle of everyday life is greatly overlooked. We use them for an immediate purpose and think little about them beyond their sound and the conventional meaning which for the time being is attached to them. Nevertheless, it seems to us that they are entitled to more consideration. Every word represents and symbolises a thought, and that thought, as Bulwer-Lytton aptly declares, is a soul. It has a life peculiarly its own, with entity and selfhood, and perhaps a quality of being immortal. When, therefore, we make a selection of terms to express what we wish to say, it should be done with a lively sense of their import and with a certain conscientious respect.

It seems unfortunate that expressive words have often parted with their primitive literal sense and received another meaning. This has often made writers hard to understand. Philosophic essays are often unintelligible to readers from this cause. Nevertheless, it is a condition which must be accepted. If we were to use words only according to their primitive etymologic meanings, our speech would be in analogy to the dress of the Quakers. They simply adhered to the fashion that was current at the time of the founding of their denomination, after others had given it up. As a result of this persistence they became more distinguished by their clothing than by even their principles. The Quaker dress tells more to the superficial observer than the most recondite explanation. The writer of this paper is likely to be involved in an eccentricity of analogous nature, and perhaps

without corresponding advantage. Yet it seems necessary to his purpose, and he must consent to abide criticism. This is always an incident to every effort; it is easier to find fault than to do work of equal merit.

Cure, in its radical sense, means care, and hence solicitude, anxiety, oversight, administration. Our ecclesiastic friends of the Roman and Anglican communions employ it according to this meaning. With them it denotes the charge of spiritual matters in a parish, and the officer to whom this is committed is a curate or care-taker. He is supposed to bestow solicitude for the welfare of those under his charge, and to be in a certain sense responsible for them. The term with the same import will most properly express the function to be fulfilled by an attending physician. His office is to cure the patient. This primarily and essentially means to care for him, to have the charge of him, to attend on him with proper diligence and solicitude. He is thus, like his brother, the clergyman, in a certain sense responsible for his welfare. He is presumed to bestow his care for the health, and thus to sustain it by judicious endeavor, enabling it through skilful remedial treatment to be restored. The aim of the genuine cure is to bring the body to integrity.

It is accordingly a legitimate and proper use of the term to apply it in designating the various modes of treatment, as for example: "Water cure," "diet cure," "movement cure," "mind cure." They all relate to specific ways of conducting remedial procedures, and while the restoring of the patients to the normal condition is their aim, the applying of means for that purpose is the thing signified.

Nevertheless, despite this being the correct use of the term, it was perfectly natural that its meaning should eventually be extended so as to include the successful result of remedial treatment, the actual restoration of the patient to health. The classic writers of ancient Rome afford us abundant examples in which *cura* or care is mentioned in the different meanings. Cicero employs the phrase *"curantes magna cum cura"*—caring with grave solicitude, and he also asks: *"An quod corpora curari possint animorum medicina"*—Since it is possible that bodies may be cured, can there be no medicine for souls? We may not, therefore, revolt too forcibly from usage in our endeavor to go back to the primitive meaning of the term as being the more genuine.

Caring for the sick, with all that care implies, is the office and duty of the physician. It is more than is included in formal

visiting and prescribing, however essential these may be. A certain knowledge is required, and this means much more than a remembering of the symptoms incident to the various forms of disease and the approved routines of treatment. Such knowledge has its use and value, but it comes far short of being sufficient for the ministry of the sick. A man has no moral right to undertake to perform the duties of the physician unless he understands what he is doing. The intelligence which is required is a rarer and more precious endowment than any proficiency which may be acquired in the learning of books, and it is not conferred in schools or always discovered by the professional examinations. It has its origin from a higher source. "Wisdom is created with the faithful in the womb," says the Hebrew sage. The man himself is the physician, despite the words and notions with which he may have stored his memory. Indeed, Sir Thomas Watson was more than sarcastic when he affirmed that in order to become a competent physician it would be necessary to forget what had been learned in the schools. There is an education that does not educate, and instruction which seems to deprive the learner of his native sense of substituting a kind of learning which may not be assimilated. It is not the legitimate province of mediocrity to judge the merits of genius. The cup cannot contain or measure what is superior to itself. We plead earnestly for the acquiring of a broad knowledge regardless of the mediums or sources by which it may be derived; but our homage and fealty belong to that skill, that perceptiveness, that intuition that transcend.

That is not a curing of the sick where the procedure is employed to alleviate or prevent disease in one form by the inflicting of some other ailment. We are having too much of that every day in the current medical practice. The individual who diseases another, whatever the pretext, commits a crime. The history of medicine in a former century was to a great extent the story of innumerable patients treated for one complaint and compelled to drag out the residue of their years suffering with another ailment which that treatment had produced. This is a form of malpractice which the statutes and courts protect, but for all that it is none the less culpable. It was the acknowledgment which Dr. Abraham Hun, of Albany, and Dr. John W. Francis, of New York, made confidentially to each other, that all things considered, mankind would be better off if there were no physicians at all.

It may be borne in mind that the real curing, the bestowing

of care upon the sick, is not so very much a matter of dosing with medicines. The province of the attendant extends into a wider field. The declaration of the physician to Macbeth in the drama largely explains the matter: "Therein the patient must minister to himself." It is a doctrine of Holy Writ, many times repeated, that faith makes the sick one whole. Yet we are not well enough endowed with that grace to dare "throw physic to the dogs," or to give it all to the fishes, whatever the advantages of such action may be. We have still a disposition to adhere "to the weak and beggarly elements," not, however, because we desire to be in bondage, but from distrust that we know or can do better. Nevertheless, we do not swerve from the belief that the endowment of the true physician is in the man himself, rather than in his mode of practice, however excellent that may be; and we are equally convinced that the secret of getting well is largely, perhaps chiefly, with the patient.

It is essential, and indeed, almost absolutely necessary, that the sick person shall not only desire but mean to recover. The *vis medicatrix naturæ*—the natural healing force—is in him, and it is for him to call it into action. This must be effected by effort and energy of the will. It was an enfeebling of the will, a living without hope or aspiration, or a blighting shock of some kind, that brought on the disordered condition, and it is now the office of the physician, and the duty of the patient to coöperate with him, in arousing it to normal activity. This is no irrational suggestion. We have all read accounts about individuals that had been bedridden for years, of those made helpless by rheumatic attacks or nervous disorders, who were healed in a moment by some violent fright or other motion. Persons in utter despair, and even those about to die, have come back to life and normal condition at the occurring of some shock of joy and hope. The will, thus recuperated, was able to effect the result.

The physician is thus able to magnify his calling as priest and exponent of nature. The person who is ill is in a depressed condition morally as well as physically. He does not have the persistence of Bruce's spider, to continue effort in spite of the numerous failures. He instinctively seeks help to enable him to accomplish what he has failed to do alone. The individual who can gain his confidence is the person most likely to aid in his recovery. We have only disgust, however, for the charlatanic arts which many employ to worm themselves into the good graces of invalids and their friends, but we admire unqualifiedly the

individual who, by his sympathetic nature, intelligence and uprightness, deserves as well as sustains the confidence of patients. We are all aware that such confidence is an essential preliminary to a good result.

Disease is occasioned by a variety of causes, among which we may suggest unwholesome conditions and personal habits, one of these being the occupying of the mind with depressing thought. The apprehending of an attack prepares the way for the actual seizure. But for incessant worrying, blighting disappointment, and gloomy expectation, few would have cancer. With habitual cheerfulness and a hopeful temper, there would be little pulmonary consumption, even in New England and the region in and about the city of New York. In 1832 the first visitation of Asiatic cholera took place in America. It entered by way of Quebec and Montreal and passed southward. A merchant in the city of Utica, New York, had arranged his business and kept on the watch, intending to go away as soon as the cholera should make its appearance. He was the first in the place to have the disease, and he died with it. It was true then and generally when epidemics prevail that a few die with the complaint, and many more from the expecting of it. "Scares" do more to sow death than any epidemic whatever. Indeed, few epidemics would be attended with fatality enough to occasion remark if individuals did not become liable from apprehension. We approve the precaution of setting houses in order and of general cleanliness, both because of the wholesomeness of the procedure and the confidence which it inspires in the community. The example of the city of Cleveland during the present season is one that all our cities can imitate with like advantage. Epidemics are "stamped out," not so much by arbitrary procedures as by the people themselves in not cherishing the expectation of them.

The true physician has a firm and intelligent belief in his own skill and ability. This is prompted into activity by the desire and steadfast purpose to be of service to the patient. The unselfish love of use is the source of untold benefits. Such belief and sympathy arouse confidence that he can make convalescence certain, and with such confidence an energy is inspired to coöperate with full force of will. There is a world of true meaning in the word of the Apostle, that "righteousness"—the right—"is revealed from faith to faith." A healing virtue is imparted from the active, causative faith of the physician to the receptive faith of the patient.

Every intelligent person knows that this is no visionary notion. We have witnessed the power of strong emotion to blight and prostrate individuals, even taking the very life; and instances are numerous of speedy restoration to health and vigor by the imparting of joyful information. If this can be expected casually, it can certainly be accomplished when such means are applied intelligently. Confidence causes remedial procedures to operate beneficially, and a strong will aroused in an invalid will enable him to master maladies that enfeeble him and are sapping his life. Health is always more contagious than any form of disease, and the physician who is in a healthful condition of mind will infect his patient with it, and so aid and enable him to overcome disorder of the body.

With the imaginative faculty we devise and build. As by its wrong application we disorder ourselves, so by applying it rightly and intelligently we may restore ourselves and others. So the real recovery occurs when the patient not only is restored to normal conditions in the functions of the body, but also in the imagining and confident belief of his soundness and integrity.

But the real curing, the caring for the sick, there is great need for reform. The prescriptions of the doctor are often overrated, and the attention which the patient actually requires is too little considered. The philosophic remarks of the erudite Mr. Dooley upon this subject come right to the point. The Christian Scientist may learn much of the physician, and the physician can learn from the Christian Scientist, but good nursing is what the patient most needs.

A physician of the Allopath school once remarked to a person in our native neighborhood that Homœopathy was sheer quackery, there was no virtue in it. "Ninety persons out of a hundred will get well without medicine," he added. We think he said "ninety-nine," but will not be positive. Doubtless the statement is true. It is not drugging that the common invalid needs, but intelligent care—such as the nurse of the right stamp knows how to give. Even in epidemic seizure this holds true. The last winter, a mother living on the same street as the writer, took sole charge of her four children with the smallpox. They made fine recoveries; they were examples of genuine curing.

There was talk of prosecuting her, for medical bigotry is more bitter and malignant than that of a religious body, and even more murderous. But that mother could boast like the Roman Cornelia, that her children were her jewels.

The new schools of medicine are praised for the reforms of the last century both in therapeutic procedures and in the materia medica. The noxious and obnoxious drugging have been largely done away with, as well as the attendant cruelties which made the sick room a veritable chamber of torturing. Fewer deaths follow upon the medical treatment, and fewer patients are discharged from the care of the physician with a new chronic disease entailed upon them for years to come. We are vividly sensible of these improvements. Nevertheless, it is the firm conviction of the writer, induced by his own experience and observation, that the extraordinary success which attended the Botanic and Eclectic practitioners of that period and endeared them to their patrons was not so much due to the safer and better medicines which they employed as to their skill and care in the sick room. Often they attended directly to the nursing themselves, for they belonged to the "plain people" and were not scrupulous in regard to an assumed professional importance, but were deft and willing to do what the occasion required. But that generation has passed away, and the good old motherly nurses and care-taking men have also to a great extent likewise disappeared. A class perhaps more scientifically trained, but too generally after prescribed artificial notions and methods, is taking their place. Nevertheless, the remembrance of their work still abides, and is a living testimony of their worth and the crowning importance of their service. Not only were they ennobled by their humble well-doing, but they magnified their office. It now comes to the front, and has become an object of ambition. No physician, no surgeon certainly, feels certain of his achievement except a competent nurse is in the field to supplement and complete what he has undertaken. Thus do the weak things, those that seldom shine in reports or win applause, confound the mighty. It is care that enables the infant to live and grow to the dimensions and usefulness of mature life; and to such care we are all indebted for what we are. With it and by it we have been enabled to accomplish all that we have done, and all that we may yet do. This care is only a little transformed when required in the sick chamber, and it enables the accomplished physician to win his laurels. All that he has learned of real value in his art has been in the line of care-taking, and this is the whole extent of his vocation. The reserve forces of the individual duly called forth and recruited effect the healing, the restoring to physical integrity; but it is

the province of the one who cares to afford those forces scope and opportunity. And this is what is properly and justly signified by curing the sick. It is a contributing of means to an end.

PART II.

SECTION WORK.

SECTION OF MATERIA MEDICA AND THERAPEUTICS.

SECTION OFFICERS:

CHAIRMAN, W. E. KINNETT, M. D.
VICE CHAIRMAN, VINCENT A. BAKER, M. D.
SECRETARY, J. D. MCCANN, M. D.

BAPTISIA TINCTORIA. QUININE SULPHATE.

J. M. WELLS, M. D., VANCEBURG, KENTUCKY.

Baptisia Tinctoria, Wild Indigo, Horse-fly Weed, Rattle-bush.
The part used—Bark of the root and leaves.
Properties and Uses.—Purgative, emetic, stimulant, astringent and antiseptic.—Principally used on account of its antiseptic virtues.

A decoction of the bark of the root is an excellent application as a wash or gargle to all species of ulcers, as malignant ulcers, sore mouth and throat, mercurial sore mouth, scrofulous or syphilitic ophthalmia, erysipelatous ulcers, gangrenous ulcers, sore nipples, etc., or it may be made into an ointment for external application. As a poultice or fomentation it is highly useful in ulcers, tumors, or inflammations tending to gangrene. In fetid leucorrhea, fetid discharge from the ears, etc., the decoction will be found efficient, if injected within the organs with a syringe. The leaves, applied in fomentation, have discussed tumors and swellings of the female breast which resembled scirrhus. Internally it may be used in the form of a decoction or syrup in scarlatina, typhus, and in all cases where there is a tendency to putrescency. It acts powerfully on the glandular nervous system, increasing all the glandular secretions and arousing the liver to a normal action. It is efficient in the atonic varieties of acute rheumatism and pneumonia, also in dysentery. I make much use of the dried alcoholic extract of the root-bark in the low stages of typhoid, and typhoid conditions generally, in conjunction with

leptandrin, and have used it extensively for the last nineteen years, and with excellent effect, in all diseases of a tuberculous character.

Prof. Finley Ellingwood, in his Materia Medica and Therapeutics, has this to say: "When fresh, and taken in sufficiently large doses, baptisia causes violent vomiting and purging. In poisonous doses there is an acceleration of respiration and reflex activity, followed by death from central paralytic asphyxia. Specific symptomatology: In low fevers with dark or purplish mucous membranes of the mouth, tongue dry and thin, with a dark coating, face dusky and suffused, circulation feeble. Therapy: With the above indications the agent has been widely used for many years by our practitioners in the treatment of typhoid conditions, and has established its position as an important remedy. It has an apparent dynamic influence upon the glandular structures of the intestinal canal, directly antagonizing disease influences here, and, reinforcing the character of the blood, prevents the destruction of the red corpuscles, and carries off waste material. In malignant tonsillitis and diphtheritic phagadena with gangrenous tendencies, wherever located, it has exercised a markedly curative influence. It is useful in dysentery where there is offensive breath and fetid discharge of a dark prune juice character, in scarlet fever and low fevers.

The infrequent mention of this drug in our journals of late years leads me to the conclusion that the right study of the drug and its uses have been much neglected. Or did our dearly beloved Prof. John King overrate its virtues? Or did the jolt it received at the hands of Prof. Howe, while discussing with Prof. Scudder, jarr it off our shelves and out of our minds?

I presume to think that, like many of the newer drugs, it has been overrated, and for this cause, in part, has in a measure been discarded. In our American eagerness to grasp greatness, we fling aside virtue, tread down the true, and leap lofty barriers to obtain a prize which proves to be a myth. We should profit by the experience of those who follow after fads and failures, and prove all things, holding fast that which is good.

If the above statements concerning this drug, one and all, severally, in parts and particulars are true (and we have quoted in part only from these great books), it would seem that no other drug would be needed in this special line. But we are given to exaggeration, to winnowing chaff, to heaping rubbish to our ruin, and we justly deserve the name sometimes applied to

us, and recently discussed in one of our journals by Prof. Lloyd. And yet this sin is not greater with us than with others.

In the past we have done well, we are now doing well; let us go on to greater things, testing every man's works, regardless of sect or schism, by the one test—is it truth?

The knowledge of greatest value, the knowledge most desired by the progressive physician, is the what, when and how of medicine; what drug shall we give? when shall we give it? and how shall we give it?—a specific preparation for a specific purpose, specifically expressed.

Then let us hasten to sift out the forceful facts from the meaningless verbiage which only mystifies, turn on the X-ray of conscientious investigation, which reveals only the central, solid truth, the bone of support of the specific theory.

For twenty years sp. baptisia, administered when its "specific indications" were present, has given me the most satisfactory results of any drug used. Not a case of typhoid fever has been treated by me in this time which at some time during its course has not had this remedy, and always with the happiest results. The tensely distended abdomen is rapidly reduced under its use, and the temperature is lowered in a corresponding degree, the nervous equilibrium restored, the tongue cleans, and the patient sleeps more quietly. But it will not jugulate typhoid fever, and if anything of the kind should occur under my treatment of the disease, with this or any other drug, I would at once conclude that a mistake had been made in the diagnosis.

This drug exerts a curative action with marked certainty whenever indicated, no matter what the disease. A case of marasmus of six months' duration in a child three years old, which had been the rounds of the best doctors in the county without benefit, had "spec, aconite and baptisia" a week, and was so improved that we put her on an emulsion of cod-liver oil, and one small bottle completed the cure.

In this case the purple mucous membrane, the bleeding of the gums around the remnant of the fast decaying teeth, pointed the way to the selection of the right remedy, the skin being pale, almost transparent.

I am cognizant of the fact that in all the above there is nothing new, nothing but what every well read Eclectic physician knows. But I come now to speak of the use of the drug which to my knowledge has not before been mentioned, viz., its use in thrush, or aphthous stomatitis. Associated with aconite, and with-

out the use of washes of anykind, or other means, it has not failed to cure in from three to six days all cases met with in the twelve years last past.

Given the indication, aphtha (thrush), the dose will be from five to twenty drops to the usual four ounce mixture, a drachm every two hours. It will not cure cachectic aphtha, contagious aphtha, or epizootic, but it will cure aphthous stomatitis.

This disease, when treated in the old way, is vexatious to both patient and physician. Fifty years ago, when I was a mere lad, one of my brothers was attacked with this disease, beginning in the usual way, with a few small patches in the mouth and on the tongue. They rapidly increased in numbers. the edges extending until they coalesced, and in a short time the lower lip was one continuous ulcer, the saliva drooling from the mouth, breath offensive, and the patient much emaciated. The case run a course of six weeks, under treatment with borax and honey, chlorate of potash and yellow root, all of which when taken in the mouth were like liquid fire to the poor sufferer. Finally some old mother advised that he be given bluing water (indigo) to drink. Improvement began at once and the patient was soon well.

Quinine Sulphate.

I mention only a single indication for this drug with the conviction that it has not before been spoken of.

Pain in the precordial region of a dull character, sometimes extending to the elbow and wrist, worse at night, and when lying on the left side (patient cannot lie comfortably on the left side), not due to pericarditis or organic heart disease. Dose, two to five grains at night for three or four nights in succession; patient will be better after the first dose, and three or four doses ends the trouble.

We give it at night so that the patient may sleep while the unpleasant effect of the drug lasts.

DISCUSSION.

Dr. Borland: In the locality where I live a great deal of use has been made in sloughing sores, of a poultice made of baptisia and something mild in combination with it, and it has been found efficacious. In thrush of children I have used baptisia considerably. It is given according to the age of the patient: 10 drops of sulphuric acid, 1-2 drachm baptisia, in 4 ounces of water, a teaspoonful at intervals three or four times a day. The acid itself will aid in most cases, but I would rather have the baptisia in

conjunction. I use a strong solution of sulphuric acid, not sulphurous acid.

Dr. Vick, of Indiana: I cure thrush with the sulphite of soda, but I use baptisia also. It is a good remedy.

Dr. Morey, of Texas: I would like to ask of the use of echinacea. Will it not take the place of baptisia and be more effectual?

Dr. Gemmell, of Forest, Ohio: In treating this sore mouth I have never used anything but sulphite of soda and it has never failed me in a single case.

Chair: Sulphite of soda is not up for discussion.

Dr. Krausi, of New York: Inasmuch as little has been said about baptisia for external use, I would like to state that during the last five or six years I have been using it in indolent ulcers, in squamous ulcers, for the removal of the crustaceous character of the sore. One part of the powder to ten parts of lead. Have had most excellent results.

SOME REMEDIES NOT ADVERTISED BY ECLECTIC MANUFACTURERS.

GEORGE W. CANNON, M. D., ST. PAUL, MINNESOTA.

The title of my paper may lead some to believe that I am adverse to the use of remedies advertised by Eclectic manufacturers. Nothing could be further from my motive than to attempt to take away any laurels from our chemists or manufacturers, whom we all believe to be as nearly perfect as men can be at this age of the world. I believe in Eclectic therapeutics, and use them in my practice. I believe in Lloyd. I believe in Merrell, and expect before long to be able to obtain of any wholesale house the articles of their manufacture upon which I base this paper.

Antitoxin, is one of the remedies to which I would call your attention to-day. We shall not enter into a description of its manufacture, as of its modus operandi you are fully aware. Neither do I expect to give you anything especially new concerning its use, but I believe that nothing short of a personal experience with the remedy can give a proper idea of its value.

It is highly necessary that it be a pure article, not such as that used in St. Louis, full of the tetanic germ, nor such as caused the wholesale slaughter of children in Camden, N. J., a

few years ago. But the pure article can be obtained at several well known houses in the United States. The brand I have used is that of Berhings, the German preparation used in 1893, when it was first introduced in this country. I have never been disappointed in the action of antitoxin when the case presented the specific indications therefor. The question, when it is indicated, is perhaps a broad one, and deserving of more study than my time has allowed me to put upon this paper.

I have found it to be indicated, not alone in diphtheria, but in all of the diseases of the throat which present a majority of the symptoms of that disease, although the microscope failed to discover the Klebs-Loeffler bacillus. The indications are, therefore, always in diphtheria, also in those diseases simulating diphtheria in which we have patches on the tonsils, fauces, larynx, pharynx or uvula, together with the swelling of the cervical glands, with prostration and symptoms of septic infection about the throat, and sometimes including the upper air passages. It is a specific in membranous croup, and its action in all cases in which I have used it for this disease has been prompt and permanent. But the ability of antitoxin to cure these diseases is not its limitation. It is an axiom in medicine, that "an ounce of prevention is worth a pound of cure." This prevention we have in antitoxin. I wish here to make the bold statement that I do not believe that a person who has received hypodermically 500 units of concentrated antitoxin can possibly contract diphtheria within forty days after the receiving of the treatment, no matter what his opportunities are for contracting same. I make this statement from my own observations, and from reports of the observations made by Dr. Bracken, Secretary of the State Board of Health of Minnesota.

The earlier the remedy is administered in the course of the disease, the more prompt will be its action. In an ordinary case of diphtheria seen during the first forty-eight hours, a full dose of antitoxin will usually remove all urgent symptoms within the next thirty-six hours. It is sometimes necessary to repeat the dose, and when a decided improvement does not follow in from twelve to thirty-six hours, the second full dose should be administered as before. I know that we shall hear to-day about all the different drugs which cure and prevent diphtheria, but my observations have been from actual experience with this remedy, and I believe my experience will be yours, when you have faithfully tried antitoxin.

Since 1893 I have seen but one case of diphtheria prove fatal, and that a boy of ten years who was moribund when I saw it, and died two hours later of asphyxia. Since 1893 my associate, Dr. F. E. Balcome, and myself have used antitoxin in seventy-nine cases of diphtheria, eight cases of membranous croup, and twenty-seven cases which simulated diphtheria, and in which the microscope did not bear out the diagnosis of the disease. All recovered except the one boy mentioned. The local treatment was usually swabbing the throat with peroxide of hydrogen every second hour. Cases have averaged about three days in bed; a few only have been longer. Although the microscope would frequently show the bacillus of diphtheria in the throat for a long period, they were thoroughly disorganized, and unable to form a membrane.

In all our cases where one member of the family was afflicted with the disease, an immunizing dose has been administered of 500 units to the remaining members of the family. After giving the remedy to those not afflicted, no restrictions have been placed upon them in avoiding contact with the patient. In fact, they have been allowed to nurse and otherwise wait upon them. Children have been allowed to sleep in the bed with the mother who had the disease, and none have contracted it.

Finally, I believe antitoxin to be the remedy specifically indicated in diphtheria and all other throat affections which simulate closely that disease. Also in membranous croup. The earlier it is given the better the results. Use the pure article. I have never had any bad results.

The dose should be sufficient to meet the indications, the latter being about as follows:

In mild cases in a child from six months to two years, 1,000 units; in severe cases, 1,500 to 2,000 units. In mild cases in a child of two and up to ten years old, 1,000 to 1,500 units; in severe cases, 1,500 to 2,500 units, while the adult dose varies from 2,000 to 5,000 units, all to be repeated when necessary.

Now we have another remedy which we have all been wont to decry, and which, in years gone by, has undoubtedly been a factor potent for much harm. That remedy is calomel.

I do not wish to speak of calomel from a standpoint of a believer in mercurials, but calomel is sometimes specifically indicated.

To-day I shall give you only one condition in which I believe calomel entitled to the distinction "specifically indicated." That

condition is anasarca, due to enfeebled circulation, caused by a weak heart. The pulse is intermittent, face puffy, feet swollen, and there is marked ascites, and in the worst cases there is hydrothorax, together with an effusion into the pericardium. Given these conditions, calomel in doses of from two to three grains every two or three hours, dry on the tongue, with a swallow of water to carry it into the stomach, is a specific. How it acts I cannot say. It will not salivate these patients, neither will it cure them. But it will carry away all the water, and leave the patient comfortable, able to be about, and enjoy life as well as a person can who has disease of the heart.

The remedy should not be continued after the anasarca has been relieved, but should be withheld until the symptoms begin again to demand something to remove the fluid; then administer it as before.

In the diagnosis, all forms of nephritis should be excluded, as it would cause immediate salivation in those cases, and hasten death. When it is indicated in cases as given above, it has succeeded for me always when our vaunted remedies have signally failed.

DISCUSSION.

Dr. Gemmill, Ohio: I have treated a great many cases of membranous and diphtheritic croup, and have not been able to save many of them. In the last three months I was called in consultation to see two cases in which every remedy we know of had been used and failed. I administered antitoxin in both cases, and saved both of them. It is the only time I ever used the remedy, and I was so pleased with the result that I am much in favor of its use.

Dr. Wiley, of Des Moines: My experience has been similar in the use of antitoxin. I have used it some thirty times. Last fall when we had an epidemic of diphtheria, I decided if there was any virtue in the remedy I would have it. I gave it without a failure except in one case, where the attending physician had given the patient up after two weeks of treatment. While I kept the patient alive a short time, I was unable to get a recovery. Given early, about three days was the average of the patient in bed. Where there were several members in the family and one had a decided case, I gave the preventive dose to the other members. I had the result stated in the paper. It seemed to be an absolute preventive in every case where given early. In membraneous croup my experience has not been as great as many of

those present. I can recall, and I presume most of those present can, our feeling of insignificance in combatting that disease. And the death scene, I think, in these cases is one of the saddest we are ever called upon to witness. Up to the time that antitoxin was introduced my experience had been 50 per cent of deaths with membraneous croup. In the last year I have had three cases. Knowing the poor results under other methods of treatment, I have used antitoxin, with recovery in each case. It is certainly lifting a great load off of my mind, and when I see a case of membraneous croup I feel that I have an ally in which I can place some reliance; and my confidence in antitoxin is so great that where I felt it should be used, and the persons refused, I would say, "Call another physician." It will hasten recovery, cut the disease short and lessen the period of convalescence. In the last case I had, I had to use two doses. The first case in which I used antitoxin was the first case I had ever seen in so young a child—a nursing baby eight months old. The symptoms were pronounced, but I hesitated in calling it diphtheria. I secured a sample of the discharge and took it to a bacteriological laboratory. It was undoubtedly a severe case of diphtheria. I made all the arrangements to administer antitoxin. The attending physician said it was hopeless. Gave 500 units; in eight hours we gave 1,000. The recovery was complete and rapid. Since then I have relied upon it and it has not failed.

Dr. Krausi, New York: Antitoxin has some value, but any one who puts up antitoxin against the use of the old tried remedies, as baptisia, and other kindred remedies, makes a big mistake. Antitoxin is an elegant remedy. It gives almost immediate results. But the question has been whether the results of the administration of antitoxin were not injurious to the patient's health and more than counterbalanced the benefit derived from the use of the antitoxin. The dose of 500 units has little value; 1,000 should be administered. Even the 1,000 has little value. Sometimes from three to five thousand units must be administered to get any results. Another point: following the administration of antitoxin in almost every case you will get a paralysis, or, you might say, a simulating paralysis, which will last from three to nine months. And you will get a deterioration, if you make a microscopical examination of the blood a month or two afterwards, showing morphological changes. It shows greater changes after the administration of antitoxin than with all the old remedies we are familiar with.

Dr. Standlee, St. Louis: I wish to corroborate some of the points made by the gentleman from New York. Also to say that in my experience large doses of antitoxin have been the causes of paralysis to which he refers. I have seen a number of cases of this kind which I think have been treated to death, that would live from six weeks to three or six months, and still die, I think, of paralysis. But smaller doses, repeated if necessary, in three to six hours, have proven more successful in my hands, and yet I am not sure but that the treatment that is ordinarily given by Eclectic physicians promises as good results as the antitoxin. I have not yet been guilty of giving an immunizing dose. We have had some unpleasant results in the city of St. Louis. We got quite a good deal of notoriety. Four children died in one family that had antitoxin. They died of tetanus. If we cannot be sure that it is pure, we must not administer it; and yet I believe that if we follow the ordinary treatment, as indicated by the gentleman from New York, and add one other remedy which I would like to mention, and which has not been mentioned, there will be little necessity for antitoxin. That remedy is permanganate of potash, a strong solution; wash the throat and let them drink it. It will serve the purpose of antitoxin, and then you can combat the other symptoms as they arise with the ordinary methods.

Dr. Russell, Massachusetts: There are certain cases of diphtheria which will die in spite of anything, I do not care what the treatment is. These are the cases where the nasal region is infected primarily and there is free absorption of the diphtheritic poison. The aseptic condition is present before you realize the child is sick. In a few hours you get infection and blood poison. There has nothing been said in regard to mixed infection. It is not always due to the Klebs-Loeffler bacillus. We have diphtheria in that form which was originally called malignant. In these cases antitoxin will not antidote. I have had a sad experience in the treatment of diphtheria in my own family. Antitoxin did not save my little boy. I injected 5,000 unite of Mulford's concentrated antitoxin; we used Eclectic remedies and everything we could think of, but that little child grew worse under any and all treatment, and he died in spite of anything we could do. A baby nine months old contracted it, and the membranes formed. I used antitoxin twice and saved it. He was almost asphixiated. The first dose of 500 units relieved him in five hours. In twenty-four hours I used 500 more, and had no further trouble.

W. B. Church, Holland, Mich.: The last speaker made it unnecessary for me to say what I had in mind. My experience is that antitoxin is of little value in the small doses that begin with the nasal affection, with weak heart, and a listless condition. Antitoxin I have never seen antidote that condition. If given in any other form, or before this stage is reached—and it is often reached in diphtheria that does not appear in any place else but on the tonsil and uvula—it may cure, but in these cases there are streptococci and we have ordinary septicæmia.

Dr. Boskowitz, New York: Just a word in regard to these remedies. I do not think anybody who is giving antitoxin knows really what he is handling. We do not know that there is any way of testing—any way of absolutely determining what you are giving. We are taking the statement of a manufacturer who has something on the market to sell. I do not believe that the fluid from any animal injected into any person will counteract any disease at all. I believe that if you get any benefit at all from the use of this class of remedies that you get it from the antiseptic that is used in its preparation and not at all from the serum. I do not believe in the theory of serumtherapy.

In regard to calomel, I do not believe any man can tell whether a dose of calomel, large or small, will salivate in any disease. You will notice that some patients will be salivated with a moderately small dose of calomel, while others can take a very large dose; and nobody can tell beforehand whether the dose of calomel is going to salivate or not. We frequently say that we came into a case when it was ready to die, and with this particular something relieved it. How many times do we give up a case and call and give them nothing at all, and nature takes care of the case, and they get well? It is lucky for the patient that we quit giving anything. I remember an old gentleman, Dr. Covert, telling of a number of cases of diphtheria that were given up in his town, and he came in with pineapple juice, and he cured them all.

Dr. Whitford, Elgin, Ill.: I will say in regard to diphtheria that I have never used antitoxin. I have always depended upon the spirits of turpentine, and I have not lost five out of a hundred. I have always used spirits of turpentine in full, large doses, and then I go on with the ordinary treatment to fulfill indications. I was called where forty children had died with diphtheria, and I said give them spirits of turpentine, and the doctor said he did not lose a case after he began the turpentine. He lied a little,

but I have some witnesses here who will testify that I have not lost all of mine. Give a child of three and a half years half a teaspoonful at one dose. Don't repeat it. One teaspoonful for eight or nine years.

Dr. Cannon, closing the discussion: I see the most of this body agrees with me on the use of antitoxin and calomel. My friend from New York says he has seen paralysis and deterioration of blood follow the use of antitoxin. I want to ask if it is not better to have paralysis follow every time—which is not true—than the long concourse of people following their friends to the grave? We are here to assist in curing disease, to relieve suffering, to overcome prejudices, no matter whence they come nor how long we have had them. And so long as pain racks and fever burns, it must be your honest effort to relieve suffering humanity.

Dr. Boskowitz says it is the antiseptic put into the antitoxin, and I would ask, what antiseptic is it? In speaking of the antitoxin, and its bad effects in St. Louis, they manufactured the serum, not from the young stallion, as they do in the East, but from a horse called Jim. I was never there, but I know of one horse in St. Louis. Jim was an old horse used to carry the friends of the poor to the poor farm. He was a cripple and had sore shoulders and had the tetanic bacillus. And from Jim the St. Louis Board of Health conceived an idea of manufacturing antitoxin, and the poor children died from tetanus. It is no argument.

My friend from New York says no man has a right to say whether calomel will or will not salivate, or in what quantity. I maintain, experience is the best guide to that.

APOCYNUM CANNABINUM.

LYMAN WATKINS, M. D., BLANCHESTER, OHIO.

Apocynum Cannabinum has for many years been of good repute in the treatment of dropsy. But as dropsy is only a symptom, and may result from many pathological states, apocynum has sometimes failed to relieve, consequently causing much disappointment and even an entire loss of faith in the efficacy of the drug. However, that the remedy is curative, at times, in dropsy is shown by the fact that it still maintains a place in the materia medica after a lapse of almost a hundred years, while many other drugs once generally used have passed into oblivion. Apocynum is useful in œdematous conditions of the body, and dissatisfaction and failure have arisen because the specific and exact abnormal perversions amenable to treatment by this remedy have been unknown or unappreciated.

Dropsy may be caused by various lesions of heart, kidney, liver, or blood and lymph vessels, and there is no single remedy that will cure every and all cases of watery exudation into cavities and tissues regardless of present or remote pathological bias. A drug should not be condemned for occasional failures, while on the other hand, applause from fervent but injudicious friends has doomed many worthy medicines to premature interment. The indications for apocynum in dropsy should be determined, and by them and them alone should the drug be judged.

Apocynum is not the remedy in structural lesions of the heart, kidneys, or vessels; it is not the remedy in cirrhosis or other hepatic affections attended by structural changes and dropsy; it is not the remedy in sthenia, full and bounding pulse, fever or inflammation. It should not be given with the expectation of relieving dropsy by its purgative action, although purgation may sometimes occur even though the dose be small.

The cases calling for apocynum are those in which there is feeble and irregular pulse, a weakness of the heart and a flabby and relaxed condition of the blood and lymphatic vessels, in short, when a general relaxation of the circulatory system retards absorption of surrounding lymph and permits exudation through the debilitated walls; there is no structural lesion, but rather vascular atonicity. With these indications well marked apocynum becomes a remedy of real value. It does not matter in regard

to the age, sex, or social status of the patient, nor does the region or part of the body affected have any special influence upon the action of the remedy. Hydrocephalus, hydropericardium, hydrothorax, ascites, anasarca, watery fullness of tissue anywhere as shown by puffiness and pitting on pressure, will be relieved by apocynum. In some cases the remedy acts so quickly and thoroughly that it has been termed "the vegetable trocar." In soft or soggy conditions of womb, joints, or muscles, not really œdema but bordering upon this state, apocynum acts well, restoring tone and color and giving firmness and resiliency to the circulation. In dropsies following malaria, typhoid and the acute contagia, apocynum will be found useful, providing, that in all cases the serum exudate is due to cardiac and vascular debility.

King's Dispensatory gives the following indications for apocynum: "Watery fullness of the cellular tissues, œdema, puffiness of eyelids and wrinkled lids as if the parts had recently been swollen, feet full and œdematous, pitting on pressure; constipation with œdema, scanty urine, skin glistening, circulation sluggish, passive hemorrhages small in amount with great depression, menorrhagia, full and relaxed uterus." After all the above are but symptoms of almost any form of dropsy and are not indications for the use of apocynum only in so far as they are the result of a weak heart and flabby blood vessels, which alone are the essential indications for this remedy.

The dose and method of administration of apocynum vary somewhat according to the individual preferences of the physician. The writer has used a fluid preparation and usually the specific medicine; the dose is graduated according to circumstances: for children ten drops of the remedy is added to four ounces of water, and one teaspoonful of the mixture is given every four hours; for the adult, one dram to four ounces of water is prepared, and given a teaspoonful every two, three or four hours as urgency demands. In severe and general dropsy the patient is directed to take one drop of the specific medicine in a teaspoonful of water every three hours; the size of the dose is then gradually increased one drop each day until ten drops are taken every three hours. This amount of the medicine may, and usually does, begin to cause considerable diarrhea and intestinal tormina; the dose should then be reduced to one drop, and if necessary gradually increased as before. In most cases the dropsy will have disappeared after one such course of administration, although occasionally a second is required.

Some of my colleagues are sure they obtain the best results with a decoction made by boiling one ounce of the apocynum root in a pint of water; the dose is a half a wineglassful three times a day. No doubt this is a very efficient method. I have never used the remedy in this way, but if the specific medicine failed, the decoction would be resorted to before abandoning the drug. As to the action of apocynum in solid or powdered extract or in pills, the results have not been markedly successful.

HEART REMEDIES AND THEIR INDICATIONS.

N. A. GRAVES, M. D., CHICAGO, ILLINOIS.

It is not my purpose to present a theoretical paper on the use of, or indications for, the various remedies which affect the heart. I hope, however, to bring to your notice some particular indications for these drugs and trust the paper will bring forth a full and free discussion. In the medicinal treatment of any disease of the heart three things must be considered. First: The determination of the disease and the condition of the heart. Second: The selection of the remedy. Third: The dose to be given. We must first know whether the heart disease is functional or organic. If organic, just what valves are involved, whether they are incompetent or stenotic or both; the extent as nearly as possible of the hypertrophy and the compensatory condition. The condition of the endocardium, pericardium and myocardia should be determined as nearly as possible.

Second only in importance is the selection of the remedy. We should know why we use digitalis, cactus, strychnine, or any other of the many drugs known to be useful in diseases of the heart. Digitalis is one of the best of all heart drugs, yet it is as powerful for harm as for good when used at the wrong time or in certain organic heart lesions.

Next in importance is dosage. Large doses are occasionally of value and when indicated should be given, but usually the small dose given for some time gives the best results.

The first proposition I shall not discuss and I shall consider the second and third together.

Digitalis: This remedy is indicated when these circulatory indications are present: A rapid, weak, easily compressible pulse; cough, cyanosis. Dyspnœa and œdema may or may not be pres-

ent. Digitalis is used successfully when the above symptoms are present if there be valvular incompetency of the aortic or mitral valves, or stenosis of the tricuspid.

It should not be given when there is marked stenosis of the mitral or aortic valves, fatty degeneration of the heart, marked arterio-sclerosis, nor when the arterial tension is high and the pulse full and hard and slow, no matter what the disease. Digitalis is of little use, if not harmful, in inflammatory conditions of the heart.

Cactus Grand. Feebleness of the heart's action with irregularity or exaggerated heart's action with irregularity are particular indications for this remedy, no matter what the valvular lesions. In feebleness it should be used in large doses, while in exaggerated or tumultuous heart's action the small dose is the best. I very frequently combine it with gelsemium when there is marked irregularity, and have obtained very great satisfaction from the combination. It is particularly valuable in valvular insufficiency of the left heart.

Strychnia: This is the remedy for weak heart indicated by a very rapid beat or by an extremely slow and irregular heart. It is the remedy in stenosis of the aorta and mitral valves, and will give results not obtained by any other remedy. A moderate dose every three or four hours gives the best results. In valvular insufficiency it will give as good results as in stenosis.

Strophanthus: This remedy gives the best results in the feeble but regular pulse. It is a good remedy in inflammatory heart conditions associated with small doses of aconite or bryonia. It is a good remedy in valvular insufficiency. I have had best results from good sized doses, five to ten drops every three or four hours.

Convallaria and Apocynum: These remedies are of much value in valvular insufficiency where there is compensatory failure as shown by dropsy of the feet or legs. They are inefficient when there is great abdominal dropsy. They give good results when the pulse is slow or rapid and feeble, when there is general fulness of the tissue. Podophyllum is often an excellent remedy to give with them. Apocynum gives best results in small doses; convallaria in large doses. I often use oxydendron with these remedies when there is abdominal dropsy, for while it has no direct influence on the heart, it is one of the best agents in the removal of serous fluid in the peritoneal cavity, and in this way relieves the heart of extra work.

Cratægus: I have used this drug in hospital and private practice for about two years. Its action is like cactus, but I do not like it as well as the latter. It must be given in large doses. Its effects are slow and the results are often unsatisfactory. Many good reports have been made of its efficiency, and perhaps I have not used it properly, for I have not been able to verify the results of others.

Sparteine: This remedy comes nearer being a heart tonic than any drug I know of with the exception of strychnia. When the heart beats are unequal in vigor and force, when the rhythm is disturbed, whether the heart is rapid or slow, whether the valves are incompetent or stenotic or both, sparteine, from one-half to one grain doses, will give prompt relief. The promptness of its action makes it valuable.

Veratrum Viride is a good remedy in exaggerated hearts action will full bounding pulse, cardiac hypertrophy and no great valvular deficiency. The patient complains that the heart seems to pound hard against the chest. Moderate doses will relieve and at times cure such cases.

Irregularity without appreciable heart lesion, palpitation with partial syncope, accompanied with precordial pains, will yield best to gelsemium and macrotys.

A feeling of chest constriction, especially the feeling as if the heart was in a vise, is relieved quickly, sometimes instantly, by nitroglycerine, 1-100 or 1-50 of a grain given hypodermically. When such condition is chronic, lobelia or lycopus, or both, in small doses will frequently give permanent relief.

For the pains of pseudo-angina I know of nothing comparable to nitroglycerin hypodermically and amyl nitrate by inhalation. True angina will often yield to this treatment, and when it does not, a combination of nitroglycerin, strychnia and morphine is effective.

Aconite and bryonia are the remedies in acute endo or pericarditis. The sharp lancinating pains, short cough and dyspnœa will slowly yield to them.

Valvular deficiencies caused by vegetations, which frequently cause a double valve sound, when accompanied with arteriosclerosis, are often permanently cured by iodide of potash in small doses given for a long period of time.

There are many other remedies affecting the heart directly or indirectly—many that are of great value—but the ones mentioned will meet the urgent indications in most cases. It is need-

less for me to say that the treatment of diseases of the heart involves much more than the medicinal treatment. Proper hygiene, diet, exercise and many other factors are to be considered with such medicine as is indicated, not as a cure-all, but as a very valuable aid to recovery.

GELSEMIUM.

B. W. MERCER, M. D., TIFFIN, OHIO.

Yellow jasmine, yellow jassamine, wild woodbine, Carolina jasmine or jassamine, is grown by many as a plant for its beauty and shade, being quite a climber, with fine flowers. It is one of the most beautiful climbing plants of the South. The flowers are in clusters, blooms in early spring, very fragrant. The vine grows from twenty to thirty feet high.

A planter of Mississippi was sick, and sent his servant after a certain root in the garden, and through mistake he dug gelseminum. The tea was prepared and drunk by the invalid, who was soon afterward affected with great prostration, and especially muscular debility so that he could not raise a limb, but was without stupor.

The effects gradually passed off and with them the fever. The planter having made this discovery used it with success on his plantation and in the neighborhood. The remedy passed into the hands of the irregular practitioners and was employed by the Eclectic physicians before its virtues came to the knowledge of the profession. Attention was called to it by a paper written by Prof. Procter in *The American Journal of Pharmacy* for October, 1852, page 307, he getting his reference from the Eclectic Dispensatory and a paper by F. D. Hill in *The Eclectic Medical Journal* of Cincinnati. They state the bark from the green root is all that should be used to prepare the tinctures.

Gelsemium powerfully impresses the nervous system, though not known to produce convulsions in man, while it may do so in the lower animals. It will allay nervous irritation, producing a sense of ease and relaxation in large dose. The eyelids seem hard to control, and the lower jaw has a tendency to drop, and loss of sensation, sometimes muscular paralysis, is the first to take place, or feebleness of muscular action, confusion of vision and vertigo. Very large doses paralyze the spinal cord and cause

complete loss of muscular power. Consciousness may be lost, but it is usually retained when toxic doses have been taken. However, the characteristic toxic symptoms are palpebral relaxation, dropping of lower jaw, profound prostration and relaxation, with ptosis and diplopia. It dilates the pupil if applied locally and interferes with the action of the muscles of accommodation. The action upon the heart depends upon the effect upon respiration. Cases of poisoning have been reported from the fluid extract of gelsemium from twelve drop doses in a child of three years. The report of two fatal cases see *Taylor's Med. Jurisp.* 1892, page 164.

It may be used in determination of the blood to the brain or spinal cord or their appendages, or in inflammatory conditions of the cerebro-spinal system. Prof. Scudder has pointed out the specific indications for it: "The flushed face, bright eyes, contracted pupils, increased heat of head, great restlessness, and excitement."

It is used in inflammation of the kidneys or urethra with good results, also in children from inflammatory states of the digestive tract, as enteritis, gastro enteritis, more especially in bowel troubles of the second summer, as cholera-infantum, diarrhœa and dysentery. As to fevers, it seems best adapted to the bilious type. It was given for gonorrhea as early as 1857.

My best results from the specific medicine are obtained in nervous females where menstrual derangements are the principal causes, combined with specific pulsatilla. It relieves irritation and increases the menstrual flow, and quiets the nervous disturbance that so many of us have to contend with.

I always use it with children subject to convulsions with specific passiflora. I have given it by the way of the bowel when the child was in the spasm where they continued so it could not be given by the mouth. I give it in very full doses.

I have given it in a few cases of gonorrhea, but without satisfactory results.

DISCUSSION.

Dr. Borland: I have used gelsemium for many years—ever since it was introduced, I believe. I like it very much, especially in cases of confinement where you have a rigid os and the labor is slow; I administer gelsemium and wait, and where the action is very slow administer a second dose. Usually it will have the desired effect. It brings it about by relaxing the fibers of the

uterus. I used this remedy in a case where a lady, if she had been pregnant I would say had puerperal mania. She was crazy and used the most vile language. I put her on gelsemium. We could not get her to take other medicine. She took gelsemium alone for three weeks, when she became more reasonable, and finally she got entirely well.

Dr. Olin, Sioux City, Iowa: I will mention one indication—vomiting during labor—which interferes with the labor. I have used gelsemium, and have hardly ever used more than one or two doses to stop it. I had several cases of tetanus, and have used gelsemium and controlled the convulsions by that drug alone, although it has been often used by others in tetanus with no results.

Dr. Graves, Chicago: Two or three years ago Lyman Watkins gave me a good idea for the use of gelsemium, and I have used it since for the condition he mentioned. He spoke particularly of those cases that have severe aching pains through the back—pains like lumbago pains. I use gelsemium in large doses, and I have obtained good results indeed. To me gelsemium is one of the best remedies I use in irregular heart action, particularly where it does not depend upon valvular lesion.

Dr. Ellingwood, Chicago: I have used gelsemium all my professional life for heart troubles, and I call it a heart remedy. If we use cactus grandiflora where there is the exalted nerve force, we increase the irritability, but if we combine it with gelsemium or use the latter alone previously for a short time, we can get a better result from the cactus afterwards. It controls irritability of the heart's action which is caused by temporarily exalted nerve force. It is not the remedy for a feeble heart, nor for organic or valvular weaknesses.

Dr. Garth, Iowa: Gelsemium is the best remedy I have ever used in lumbago.

Dr. Church: Gelsemium is a great favorite with me. I wish to emphasize it. It is the remedy for children in convulsions, and it should always be at hand in the treatment of children when, as the old ladies say, "the disease is going to the brain"—when they begin to roll the head and the muscles twitch. That is an early symptom of convulsions, and if these become habitual with it, the child may develop into an epileptic. Gelsemium will prevent this catastrophe. I do not stop at a small dose, but give ten to twelve drops of Lloyd's specific, and do not fear so long as high cerebral excitement exists. It is a specific.

Dr. Ketchum: I would like to add to what is said of the large dose. Some years ago my wife suffered from rheumatism. I might call it rheumatic tetanus. She seemed about to choke to death. I gave her a hypodermic syringe full of gelsemium and in five minutes she began to relax and in fifteen minutes she was all right. In one case of puerperal fever I gave a hypodermic syringe full twice of gelsemium with good effect. I am in favor of quite large doses.

J. M. Wells, Vanceburg, Ky.: In extreme cases the large dose of gelsemium is permissible, but I regard it as somewhat dangerous unless there is some active disease to antagonize it. I have given five drops every fifteen minutes for an hour, until four doses were taken, and found it a more certain sleep producer than morphine.

Dr. Pollock, Chicago: Especially after labor, where there is considerable pressure on the urethra, giving it three or four hours after labor it saves the use of the catheter, particularly where you are not sure of your nurse. It is also of value in a great many surgical cases, as hysterectomy where the patient has to be catheterized, for this saves that trouble.

Dr. Borland: Some years ago I had a young lady with uremic convulsions. Used various remedies, but could think of nothing better than gelsemium, which was administered by the rectum. Gave one drachm.

Dr. Sharp, Buckland, Ohio: I have had some experience with gelsemium in nervous headache. Ten drops—single dose—will relieve it almost immediately. Large doses of gelsemium in any case, closely watched, and repeated only as demanded, are safe, and much more certain to produce results than frequently repeated small doses.

ECHINACEA ANGUSTIFOLIUM.

C. E. COLE, M. D., PRAIRIE DU CHIEN, WISCONSIN.

In writing of this invaluable drug for an Eclectic society it is not necessary to go into detail in regard to the history of the plant, as every Eclectic is or should be well informed in regard to same. However, echinacea has been subjected to a clinical test by the progressive physicians of America during the past six years, and it is to the results of some of my own experiments with the specific medicine that I wish to call your attention to-day.

From clinical experience I believe that as an alterative and antiseptic echinacea is not equaled by any single remedy in the Materia Medica. Wherever there is a sepsis or a depraved condition of the blood give it in full doses with confidence and you will rarely be disappointed. In a series of twenty-two case of typhoid fever where echinacea was the leading remedy used, all recovered in three to five weeks without any sequela.

A case of syphilis wherein the eruption was so great that the epidermis came off from the hands and feet and nearly all the hair fell out, leaving the patient bald over the whole head, was apparently cured in three months by the use of Specific Echinacea, twenty drops every two hours during the day. The eruption disappeared, leaving the skin clear and smooth; the hair returned, and the sore throat, which was a severe symptom in this case, also disappeared, leaving the patient feeling as well as he formerly did.

Two cases of cancer of the os uteri were cured by the local and internal use of echinacea. Several cases of epithelioma of the lip and face, also one on the palm of the hand, were cured by the internal and external use of the remedy. In gangrene it has proven to be the best remedy in existence, and has no peer in the treatment of puerperal fever, foul ulcers, boils, the bites of dogs and snakes. It is also a superior remedy in the treatment of meningitis and as a preventative and cure of tetanus.

I am now experimenting with it as an aphrodisiac, but am not prepared to report results as yet, although it seems to be working satisfactorily.

In conclusion, I am inclined to believe that where the indications are right, and the preparation a good one, echinacea comes nearest being a panacea of any remedy in our medicine case.

DISCUSSION.

Dr. Sharp, Oklahoma: I believe echinacea has been the most overrated remedy we have had to deal with. I have tried it in almost all cases where recommended and in a few I thought I saw some results. I fear if our case recovers we give our remedy the credit whether it is due or not.

Dr. Wells: I have used a good deal of echafolta. I suppose it is about the same. So far as the medicinal effect is shown, it is plain to my eye that alcohol is about as good. It will arrest the pain of a bee sting or wasp sting. If applied to an abrasion of the skin it eases the pain, but I believe alcohol will do the same thing. The odor is intolerable. It smells like the breath from putrid throat. I sometimes use it as a face lotion—put a little in the water when I shave.

Dr. Watkins,Blanchester, Ohio: I think there is no doubt echinacea is praised and condemned by more physicians than almost any remedy. There is no doubt in my mind but that it is a fine remedy in certain cases, but it will not cure everything. It is in constant danger of being condemned to a premature death by the enthusiasm of its friends. That it will cure cancer of the uterus I think most of us will take with a grain of salt—or half a pound for that matter. That it will cure syphilis is a matter of doubt. In cases of acute infection, from a flea bite to an infected uterus, I am a friend of echinacea; but I sometimes become disgusted with the articles I read when it is claimed to cure almost every conceivable disease on the face of the earth. It will not do it.

Dr. Aylesworth, Canada: I desire to add my testimony to the efficacy of echinacea in acute septic infection. I do not admit it will cure cancer or these specific infections, but septic infections it will cure. I will mention a case which occurred. An Old School physician was poisoned in performing a laparotomy in a septic case. I suggested that he use the echinacea, but he persisted in his own course for weeks. He finally yielded to my perseverence and took it, when he promptly recovered.

Dr. Borland, Sioux City: There is no remedy that will cure everything. Somebody has got to die. We can't all live always. I have used it in a good many cases of infection, and they heal up and do finely.

Dr. Robertson, Atlanta: I had a case of a little boy bitten by a poison adder. His hand was swollen and it looked as though his arm would soon be involved. I gave a teaspoonful every

hour. In a few hours it began to subside and there was no further effect. In the treatment of syphilis I have used it in a number of cases and I am sure with satisfactory results.

Dr. Ellingwood, Chicago: Echinacea will cure those conditions in which there is organic infection. I do not think it will fail in that class of cases. You can decide positively by this.

BERBERIS AQUIFOLIUM.

ELOISE G. FOLTZ, M. D., PERRY, IOWA.

Berberis Aquifolium, Oregon or mountain grape, is a shrub three or four feet high, growing on the higher altitudes of the Pacific slope. It has a pretty yellow blossom, which is followed by a dark berry. Both flowers and fruit are employed in medicine.

It contains several alkaloids, the most important being berberine. The dose of the fluid extract is from five to twenty drops. Berberis was introduced into medicine by Dr. Bundy, of California, only a few years ago. It had become quite extensively used as a domestic remedy in that locality.

Physiologically berberis is non-poisonous, but in overdoses produces a general sense of exhaustion, stupor and muscular weakness. Western people employ it as an anti-periodic and glandular stimulant.

A writer in *Homœopathy* recommends it in bilious headache because of its action on the liver. It is also advised in syphilitic and scrofular conditions. It stimulates waste and repair. It is well tolerated by the stomach and seems to improve digestion and increase absorption. It has a decided action on the spleen, and in large doses is an active diuretic.

The greatest benefit from the remedy in my hands has come from its alterative properties in affections of the skin. Here its application is wide. It can be used with benefit in almost every form of integumentary disease, and in some conditions acts as a specific. In saltrheum, in eczemas of the various kinds and locations, in psoriasis, and in scaly effections of the scalp, all may be benefited and many cured. In the rough, pimply, pustular eruptions of the face, berberis should be the first remedy tried. In acne of long standing it will not disappoint you. Use with it a local treatment, with proper care to diet, and you will soon have

a clean, smooth complexion. If there is any menstrual irregularities, uterine or ovarian irritation, I combine or alternate berberis with aletris or helonias, or other remedies may be suggested, but don't lose sight of berberis in these cases.

I use ten drops four times daily, sometimes increase to fifteen drops.

DISCUSSION.

Dr. Gemmell: I find berberis one of the finest remedies I have ever tried for pimply face which so many young people have and wish to get rid of—blackheads. Berberis, 10 to 15 drops three or four times a day, will cure in a week or two better than any remedy I have ever used.

MURIATE OF AMMONIUM.

N. A. HERRING, M. D., BENTON HARBOR, MICHIGAN.

This remedy occurs as a white, transparent, tough, fibrous, peculiarly crystalized salt, without odor and with an intense pungent, salty taste. It is soluble in three parts of cold water and in one part of boiling water. The dose is from one to ten grains.

It is one of our best stimulant expectorants, and although one of our oldest remedies, it is yet one for which no substitute has so far been found. It exerts its peculiar beneficial effects upon the bronchial mucous membrane and is especially useful in all forms of catarrh and bronchial troubles. No other remedy that has ever come to my notice will exhibit such a beneficial effect in acute and chronic catarrhal affections, bronchial catarrh, coughs, capillary and catarrhal bronchitis. I use it in combination with bryonia, sticta, collinsonia, drosera, and other of our specifics for cough with marked success. I always disguise the taste with fluid extract of licorice. In my practice I have a great many cases of chronic catarrhal difficulties to contend with, and I find that ammonium muriate used as a basic remedy acts nicely in nearly all of my mixtures. Catarrhs of all kinds are promptly benefited by its use, whether they be nasal, gastric, gastro-intestinal, catarrh of the bladder or leucorrhea. Wherever there is an abundant thick secretion from the mucous membrane, ammonium muriate is indicated.

This remedy will act promptly, and if used as indicated will not disappoint you. Because it is an old remedy is no reason

why it is not a good one, and while in the past it may have been misused, and its specific indications not properly understood, now that we are able to point out its beneficial action when used as indicated, is the better reason why we should give it a fixed place in our materia medica.

Question: Dr. Ketchum: I would like to know the dosage and the frequency.

Answer: The dose is from one to ten grains, and as for the frequency, I repeat from one to three hours a teaspoonful of a mixture containing from one to five drams in a four ounce mixture.

Question: Do you use it in chronic cases?

Answer: Yes. I had a case not long ago of one of our prominent citizens who had been treated by a specialist for a chronic catarrh. He was hacking all the time. I prepared a four ounce mixture, giving ten to fifteen grains of the muriate of ammonium to the ounce, adding licorice and possibly ten drops of bryonia, and told him to take a swallow every hour, and in three or four days I asked, "How is your cough?" and he said it had left him entirely. Fifteen grains to the ounce.

Question: Do you use it also in acute cases.

Answer: Not so much as in the chronic cases.

DISCUSSION.

Dr. Wintermute, Cincinnati: My experience with muriate of ammonia is exactly as the doctor says. I have been surprised that this remedy has not been used more than it has. I have always used it. As he says, I use it in combination with other remedies as a cough remedy. In the coughs we get in the winter it is a stimulating expectorant. I am surprised in talking with other physicians that it is so little used.

Dr. Borland: I wish to add my testimony to the value of this remedy. It was used by the old German physicians many years ago. I have been practicing fifty years, and I have used it internally and externally, and almost eternally. I use it for many things. It is excellent in inflammatory conditions; where you have inflamed joints. Make a solution with vinegar and put it on hot, if possible. Use muriate of amonium and vinegar and keep cloths applied wet with it, and you will stop the formation of pus. I had a boy last winter who was sliding down hill and he met with a compound comminuted fracture of the tibia and fibula. We expected him to lose the limb. It suppurated where

the bone went through and way up along the limb. We used muriate of ammonium and vinegar for two weeks, and the suppuration stopped, and he is going to have a good limb. Two or three pieces of bone came out, but he will eventually have a good limb.

Dr. Stouffer, Pittsburg: I have been using it for over twenty-two years myself, internally and externally. I find it a very useful thing in cases of asthma and a dry condition of the throat and fossa where the patient can hardly get his breath and a disposition to hacking all the time, often a few grains on the tongue is a good thing, and in other cases I put it in water and let them take a teaspoonful every twenty-five or thirty minutes, until the condition is subdued. In cases of swelling, such as in inflammatory rheumatism, it will act better than any other remedy.

HYPODERMOCLYSIS WITH THE GLYCEROPHOSPHATES.

C. P. Reid, M. D., Hampshire, Ill.

More than a year ago in *The Chicago Medical Times* I reported several cases of diphtheria and ptomaine poisoning and their treatment by the hypodermic injection of normal salt solution with carbolic acid instead of antitoxin. In a conversation with Prof. Ellingwood shortly thereafter he suggested the idea of treating other diseases by this method with other substances. He discussed the subject in an editorial that appeared in *The Chicago Medical Times* soon thereafter. Experiments along this line were strongly urged. I had a few cases on hand that I thought needed the glycero phosphates particularly of lime and soda. Several of them had taken the medicine internally without benefit. I concluded to give the glycero-phosphate of lime and soda a trial by the hypodermic method. I do not know why it should act better one way than the other. The only reason I will offer is this: I noticed that the cases that had not been benefited by the glycero-phosphates all had a hyperacid condition of the stomach, and after taking the glycero phosphates hypodermically a short time the stomach became normally acid, and they could then take the medicine internally with benefit. So I have concluded that the strongly acid condition of the stomach

wholly or partly decomposed the glycero phosphates into less useful salts, and their benefits were lost in that manner. I have used the glycero phosphate of lime and soda by the hypodermic method in a number of cases with considerable success, and in three cases that failed to get benefit from the compounds when taken internally. I prepare the normal salt solution by taking a scant teaspoonful of common salt to each pint of sterile water; to two ounces of this I add six grains of glycero phosphate soda, injecting this amount into the cellular tissues under the arms or over the abdomen with a large syringe, using two needles connected by a small rubber tube. Some soreness is usually complained of, but have not had an abscess develop or any unpleasant conditions arise. In a few cases four or even six ounces of the solution seem to do better than the two ounce dose. Will report two or thre cases.

The first case I will refer to was that of a gentleman 82 years old. Good family history; farmer; had always been healthy and a hard worker; was in the field, with other members of the family assisting him. When about to return home he seemed confused as to direction, and would have gone away from home, but returned with the others. Upon reaching home the house seemed strange to him. He had to be shown his room, one he had occupied about forty years. He was confused as to directions and had to be watched to keep him from leaving home. He claimed he was not at home, and always wanted to go home. His memory failed and his hearing, that had been poor for some years, grew worse. His appetite was good; strength fair. His condition grew worse for rather more than a year. Diagnosis acute dementia. He had taken glycero phosphate of lime and soda internally without benefit. Gave him six grains of the lime salt and four grains of the soda salt in two ounces of salt solution every day for three weeks. After two weeks a slight improvement was noticeable. He paid more attention to the members of his family, was less anxious to go home, slept better. After three weeks' daily treatment I put him on elixir glycero phosphate of lime and soda three times a day and continued injection each alternate day for five weeks, then discontinued them, but continued the elixir. After about five or six weeks he failed to gain satisfactorily, when the injections were used daily for about a month, since which time he has taken the elixir rather more than half of the time. He is much improved, realizes that he is at home, cares for himself without watching, goes to church with

the family, hears much better than for five or six years, and is quite comfortable.

The second case is that of a young man, 25 years old; telegraph operator and station agent. No specific trouble. Nine years previous to the present attack he had cerebro spinal meningitis, but recovered; learned to telegraph, and at time of attack was station agent. When I saw him he had been compelled to give up his position nearly a year before. Had passed through the hands of several physicians without benefit, but had steadily grown worse. His trouble had been pronounced locomotor ataxia. He had several symptoms usual to that condition. His walk was unsteady, knee jerk slight, soles of the feet numb, could not stand still with eyes closed, sharp pains in the legs, control of the bladder not perfect. Had become a care to his relatives. I gave him six grains of the glycero phosphate of lime and four grains of glycero phosphate of soda in three ounces of normal salt solution every day for six weeks, then alternate days for four weeks. After four weeks' treatment I put him on elixir glycero phosphate of lime and soda, which he has taken till lately. He is now taking 5 grains glycero phosphate of lime, 1-40 grain of strychnine and 1-50 grain chloride gold three times a day. Three weeks ago he resumed his position as operator and seems likely to recover fully.

Case third is that of a man, 48 years old. Shoemaker. Hard drinker. Has been demented a year or more. Two ounces of the normal salt solution with usual amount of the glycero phosphates did little good. I increased the amount to eight ounces daily. He is considerably improved and seems likely to recover.

Case four is a lady, 62 years old. She had suffered about a year from cystitis and kidney trouble. The amount of urine passed was extremely small. Two ounce doses of the solution with ten grains of the salts did no good, but when the amount was increased to eight ounces, improvement was rapid and the flow of urine largely increased. I am treating two cases now that are improving after being treated by various other methods—one a case of extreme anemia. In this case I am using glycero phosphate of lime and the glycero phosphate of iron.

BAPTISIA, AN ECLECTIC DRUG.

JOHN URI LLOYD, PH. D., CINCINNATI, OHIO.

Before me lies a letter from a physician concerning baptisia. The question is, is baptisia an antiseptic, and, if so, how does it exert its influence? Since the question is one that is of general interest to our section of the medical profession, I shall reply to it through our society, prefacing my remarks by the statement that twenty-five years ago this baptisia problem was a matter of discussion between Professors Howe and Scudder, and that to myself, an onlooker, it seemed to be a subject of discussion because of misunderstanding of the position of the respective opponents. As I saw the matter, they combated each other through their own errors concerning the position of the other. But to the subject of baptisia.

If by an antiseptic it be accepted that a substance must be capable of preventing putrefactive fermentation or, to put it unmistakably plain, the rotting of dead flesh, I answer most emphatically *no*. Baptisia is not such an antiputrefactive agent. A fragment of pork or of fish can be covered with powdered baptisia and yet it may spoil as quickly as if it were not so coated. A fragment of flesh can be injected with an aqueous solution of the constituents of baptisia, and putrefaction will in no wise be prevented or retarded. An alcoholic solution of baptisia constituents injected into a fragment of flesh proves to be no better as a preservative than an equal amount of alcohol of the same strength. The question may be asked, how can this be, when the use of baptisia originally was that of a dressing for malignant ulcers, in which cases it is claimed to lessen their foul discharges and overcome tendency to putrescence? I reply, this is a different problem and concerns living, not dead, tissue, the object being to prevent death of living flesh, not to prevent putrefaction of dead flesh. In the sense of preventing putrefaction of dead flesh, baptisia is not an antiseptic, and in this same restricted sense we find the dictionary definitions concerning the term antiseptic.

The use of baptisia as an antiseptic in medicine is not that of the contact action of a drug on dead flesh. Eclectic physicians use baptisia in diseases wherein the vitality of the patient is feeble with tendency to disintegration of live tissue. "The keynote of this drug is sepsis, accompanied by dark or purplish discoloration

of skin and mucous membranes." (Felter in *Am. Disp.*) Thus where the patient is afflicted with a disease that tends to tissue destruction, marked by boils, ulcers, foul discharges, etc., baptisia is indicated as a preventive of such structural death tendency.

Accept, then, for the sake of argument that baptisia will do this and that it acts by its influence on the vital force, or rather, as seems to me preferable, that it increases the vital resistance of the patient towards the destructive influence that marks the trend of disease, and then baptisia becomes an antiseptic.

On just these points it seemed to me Professors Howe and Scudder differed, each through misunderstanding of the position of the other. Howe was a surgeon; he took the dictionary definition inflexibly, and argued that an antiseptic must be capable of preventing putrefaction of dead flesh by mere contact therewith. He argued that an antiseptic to be an antiseptic must be capable of destroying the living organisms, be they bacteria or vibrones, that cause dead flesh to rot. Scudder, on the contrary, claimed that baptisia gave to the vitality a sphere of resistance that prevented the death of live tissue, and thus prevented subsequent putrefaction. He claimed that if putrefaction of vitalized tissue was in consequence of the presence of bacteria,* baptisia gave to that tissue the power to resist the destructive efforts of the bacteria. Thus these two authorities differed because of the fact that they saw each the other in a false position.

But to return to baptisia. Such drugs as this, that act through the life current, whatever that may be, and thus prevent flesh death, are antiseptic in their final effects, regardless of whether or not they will prevent putrefaction of dead flesh. And in this sense one might venture to make a double classification of the class of bodies known under the general term antiseptic, as follows:

Antiseptic.—1st. A substance capable of arresting putrefactive fermentation by destroying the bacteria or vibrones that produce such result, or of arresting putrefactive processes accompanied by the presence of these organisms. Such an antiseptic may be capable, also, of coagulating albuminous materials and inducing other structural changes in dead flesh that tend to prevent its putrefaction. Such an antiseptic must come into contact with the material to be influenced.

* I leave out of this paper the question as to whether bacteria causes putrefaction or simply accompanies putrefactive processes.

2nd. A substance that exerts its influence on the life current, enabling an afflicted person to resist the attack of putrefactive bacteria or giving to flesh of low vitality the power of resisting the attack of putrefactive agencies. Such an antiseptic exerts its influence through the nervous or circulatory systems and need not be in material contact with the affected part.

But this second definition leads to complications that we should not pass unnoticed. Seemingly any substance capable of reviving the resources of an enervated person comes under its province. Thus nux vomica, tonics, and even wholesome food, will increase the power of resistance against diseases that tend to tissue destruction. Still, it seems reasonable to accept that while this is true, the term may be rationally restricted to such bodies as possess a special power in the direction of sepsis prevention, malignancy, gangrene, etc., and among such would be classed as examples baptisia and echinacea, which in themselves have no power of preventing the putrefaction of dead flesh by simple contact therewith.

The foregoing was written for the National of 1900 and laid aside for consideration. It seems no less pertinent now than then, nor has the writer any reason to change the line of argument. Rather has he reason to add a few lines.

During his recent journey to California, the question was asked by a bacteriological student as to whether echinacea was an antiseptic in the light of being antagonistic to fermentative decomposition by contact with dead flesh. To this the writer replied that in his opinion echinacea does not possess any power in that direction, being properly classed with baptisia, and thus becoming an antiseptic of the second class.

PILOCARPUS PINNATUS—JABORANDI.

E. A. WOLF, M. D., DENNISON, OHIO.

Natural Order—Rutaceæ, Xanthoxyleæ.
Common Name—Jaborandi.

Jaborandi is a native of Brazil, and grows to the height of from six to ten feet. The words jaborandi, iaborandi and jamborandi, are used in Brazil in a genuine sense to distinguish various pungent, sudorific plants.

Some nineteen different species representing this genus have been described at different times and by different writers. Prob-

ably the great number of species of this shrub gave rise to the considerable discussion as to the exact botanical relation of these different species; yet all agree that they belong to a pilocarpus.

In 1874 Dr. S. Cantinha, of Pernambuco, first introduced jaborandi to the medical profession, since which time it has been in constant use as a remedy. To go into botanical detail and describe the points of difference of the nineteen different species would be far beyond the scope as well as the intention of this paper. In 1875 E. Hardy, of France, and A. W. Gerrard, of England, almost simultaneously discovered the active principle, pilocarpine, from jaborandi leaves. Subsequently jaborine, pilocarpidine, jaboridine and volatile, jabonine, as well as jaboric and philocarpic acid, have been isolated.

Action: The effect of jaborandi on the glandular system is very positive and prompt, increasing their secretion very materially. Especially is this effect noticeable of the salivary and the sudorific glands, after giving a full dose. The salivary gland often secretes one to two pints, and in from ten to twenty minutes a profuse sweat begins, lasting from three to four hours. The secretions from the bronchial and lachrymal glands are also augmented. In some individuals the mucous glands of the intestines are stimulated, augmenting their secretions and causing diarrhea.

Its action on the kidneys, as a diuretic, is probably most pronounced by small and oft repeated doses. This can probably be best explained by observing that large doses produce free sweating, thereby lessening the urinary secretions. During free diaphoresis the urea of the urine is diminished, owing to the fact that sweat and saliva also contain urea. Jaborandi also increases the mammary secretions.

The effect of jaborandi on the heart after a full dose is first to stimulate and increase the number of beats, soon to be followed by depression and slowing of the pulse. It should be used with considerable caution where there are organic lesions of this organ. Its paralyzing action on the vasomotors accounts for the cardiac asystolia and the increased activity of the sudorific and salivatory glands.

Indications: Pilocarpus is indicated in "deficient secretions; marked dryness and heat of the skin and mucous membranes; pulse full, hard, sharp and strong; muscular pain; muscular spasm; urine suppressed, of deep red color and high specific gravity; elevated temperature with difficult secretions; puffiness

of the tissues; rigid, hard os uteri; marked restlessness; dry, harsh cough; tenaceous sputum; œdema; uræmic poisoning and convulsions; increased ocular tension; atropine or belladonna poisoning;" ptomain poisoning. It is used in sthenic cases chiefly.

Uses: The diseases calling for jaborandi are numerous. Its stimulating effect upon the glandular system naturally makes it a useful remedy in most affections of the kidneys. It is employed to advantage in acute albuminuria, Bright's disease, uræmic poisoning, albuminuria of pregnancy, and diabetes insipidus. By its stimulating effect on the sudorific glands we are in possession of a diaphoretic which for positiveness has few equals. Whenever a diaphoretic is needed, there being no contraindications, jaborandi has a place. By reason of its effect on the kidneys and sudorific glands it should not be forgotten in hydrothorax, anasarca, ascites and chronic pleurisy. Its diaphoretic effect is not to be forgotten in acute and chronic rheumatism, syphilitic rheumatism and eruptive fevers. Bronchial coughs, due to lack of secretions, are promptly relieved by the use of jaborandi. Those skin disorders of a dry character often yield to the continued use of this remedy. Pilocarpus probably is more often called for in the internal treatment of disease of the eye than any remedy in our materia medica, and for its use in these diseases I would refer you to Kent. O. Foltz's able work on diseases of the eye.

Jaborandi has been, for the past five or six years, a remedy to which I have appealed, and without failure, in a condition for which I had never seen it recommended. That condition is one of the complications—probably I had better say one of the symptoms—of typhoid fever. I know of no better way of conveying to you that condition than to cite you two very typical cases in which this complication stood out unusually prominent and gave considerable concern, the alleviation of which, no doubt, contributed very materially to their eventual recovery.

On August 29th, 1895, I was called to see Miss E. S., aged 18. On examination found her suffering from typhoid fever, which had set in abruptly, the day before, with a severe chill. She was very restless the first three days, but perfectly rational. During the night of the third day she became very delirious, in fact so much so that she required two attendants continuously to keep her in bed, which they could only succeed in doing by resorting to force and fighting her to exhaustion. On the morning of the fourth day I redoubled my efforts in trying to reduce her temperature, thinking that that was greatly the cause of the

delirium. Her tongue had become coated with a brown coating and was dry and cracked. Pupils normal. Her delirium continued in spite of my efforts until the sixth day, when desperation seized me. Realizing that if the delirium continued much longer my patient would be so completely exhausted as to make her recovery extremely doubtful, I returned to my office very much discouraged. In two hours I called on the patient again, as I had promised. Knowing nothing else to do, I placed an ounce of Lloyd's jaborandi in my pocket before starting. That sick room for several days had been a sight not to be forgotten soon. Nurses and family worn out and despair in their hearts, and seemingly only a question of time until the patient would collapse from sheer exhaustion. Something had to be done. I gave her a teaspoonful of jaborandi and gave instructions to give ten drops every two hours until my return. You have already concluded in your own mind that during my absence the patient took a good sweat; but never a drop did she sweat. One thing she did do, and that was, greeted me by name and time of day and proved herself as rational as I.

On inquiring as to how this change had come about, I was informed that shortly after I had given her that dose of medicine she began to grow more calm, and that after giving her two more doses of the medicine she fell asleep and slept for probably an hour, waking rational, as I then saw her.

On being asked why I did not give that medicine when she first became delirious, you may rightly guess that I was at a loss for an answer. The jaborandi had little or no effect on the temperature, or anything else, so far as I could see, other than to relieve the delirium and moisten the edges of the tongue. The case ran a typical four weeks' course and recovered without a return of the delirium.

Case two. Mr. B. C., aged 25 years; single, machinist by occupation, called on me on January 19th, 1900, having had a severe chill that morning. His temperature was 105 degrees F., and on examination found a typical case of typhoid fever. Placed him on the usual remedies. Called next day and found temperature same as day before and practically unchanged in his condition. Having some business interests out of town that demanded my immediate attention, I turned the case over to one of my neighbor physicians—an Allopath—who, by the way, is liberal and quite successful, and a royal good fellow—and left town that night. On my return (January 26th) I inquired of the doctor as

Since my first experience I have used this drug many times, and usually with success. I find that it acts much better in cases of diarrhœa which have existed for some time and where the tissues have all become relaxed and flabby. My failures have been in those acute cases where there has been much irritation. There is no doubt of its astringent and tonic action upon the mucous membrane of the lower bowel, if given in properly selected cases.

I have also used it to some extent in cases of menorrhagia and hemorrhage from the nasal region. When successful it has been in debilitated patients when the resistance was not great and the hemorrhages are of a passive character. This remedy is well worth remembering, for it will prove valuable in many instances; and it will be hard to supply its place.

TAG ALDER.

R. S. TRASK, M. D., NASHVILLE, MICH.

Tag alder is a small tree, or shrub, growing from ten to thirty feet high, and from one-half to three inches in diameter. It is found on the borders of streams, lakes, rivers, and on swampy lands in most parts of the United States.

Part used: Bark.

Preparations:

Powdered bark	dose 10 to 60 grs.
Alnuin	dose ½ to 3 grs.
Specific Alnus	dose 5 to 30 minims
Fluid extract	dose 5 to 30 minims

Tag alder is one of the most important, as well as one of the most neglected, remedies in use. Its specific indications are plain and easy to understand. Its field covers imperfections of the blood due to imperfect superficial circulation. It is indicated in scrofulous skin diseases, general depravity of the system, and general impairment of the nutritive functions. It promotes a clear, soft, healthy skin by purifying and enriching the blood and increasing the blood corpuscles; and it also builds up and strengthens the whole system.

Tag alder is a remedy for worn-out constitutions, as it repairs and tones up the mucous structures of the entire system. In cases where the tongue is broad and flabby, skin and mucous

membranes pale and inclined to ulceration, gastric juice deficient, it matters not what you call the disease, you will find tag alder a true specific. I have used it for the past thirty-five years, and it has never failed where the above indications were present. I have found that in the after effects of fever, where the mucous surfaces of the system have become weak and inactive, that the tonic effects of this remedy will soon correct these conditions, as it increases the strength of the pulse and power of the heart, and at the same time adds strength and weight to the body by its tonic and restorative influences.

Tag alder is also a tonic for the gastro-intestinal tract, as it increases the gastric juices, stimulates normal secretions, increases the appetite, aids assimilation, builds up and strengthens the entire system, expels waste product. Anemic conditions improve, and the pallid conditions of the skin and mucous membranes quickly disappear. In indigestion caused by lack of gastric juice we find a general breaking down of the entire system. The patient becomes weak, loses flesh; the secretive and excretive organs fail to properly perform their functions, causing a general catarrhal condition of the mucous surfaces of the entire system. There is weak action of the heart, and a general breaking down from mal-nutrition. When you have a case of this kind prescribe alnuin, and it will not disappoint you, as it will stop the waste, build up the system, and change despair to hope and happiness.

In general debility from protracted diseases, loss of blood, overwork, or from old age, it exercises specific properties, supplies new blood cells, stops mucous discharges and the wasting away of the tissues.

If physicians knew what a good remedy tag alder is it would soon find a place in the medicine case of every physician in the land. I have used this drug for many years, and the more I use it the more I like it, and I have never seen any bad symptoms following its use in any instance.

My favorite prescription is: Alnuin, one part; sugar of milk, four and a half parts; powdered sugar, four and a half parts; trit. Dose, five or ten grains, one-half an hour before and one hour after each meal.

HYOSCYAMUS. (HYOSCYAMUS NIGER, HENBANE.)

LEE STROUSE, M. D. COVINGTON, KY.

This remedy is said to be narcotic, anodyne, sedative, and antispasmodic. I believe that its anodyne, sedative and antispasmodic actions are due only to its narcotic effect.

There are upon our market several derivative salts, none of which I have had experience with, but from reports they seem quite unreliable. I will speak of the specific medicine only.

In my earlier practice I was at a loss for a remedy that would allay irritation of the nervous system and promote sleep in cases of insomnia, with a general headache of a rather dull character, not being localized at any definite point. For a person who worries all day, and at night retires taking his work with him to study it over, and at the same time try to sleep, a few doses of hyoscyamus will send the work to the shop or desk and put the sufferer to sleep.

In the sleeplessness and irritable periods following typhoid fever, it may not put your patient to sleep, but it will produce a state of rest much longed for in those cases, a sort of half stupor, from which, when they arouse, they feel refreshed and rested.

In those cases where the wife from household cares is restless, nervous, having aching pains, first in one place and then in another, not so severe, but just enough to disturb her sleep, a few doses before retiring acts like a charm, promoting both rest and sleep.

If not used too freely, it produces no bad effects. Care on this point should always be observed. It does not upset the stomach, producing a disagreeable taste on rising, nor does it destroy the appetite. Neither does it check or prevent the normal secretions of the body, but it paves the way for better results from other medicines. It does not act so well when there is fever with a dirty, pasty, yellowish coat upon the tongue.

It does not constipate like some of the narcotics, nor does it influence the heart unpleasantly like some others of this character. By its use you avoid the danger and more permanent deleterious effects often induced by other hypnotics.

The second or third dose seems to produce a stimulating effect, a glow of warmth (similar to xanthoxyllum), and then

soon follows a delightful tranquilizing rest, inducing that longed-for sleep.

In the early part of 1901 I begun the treatment of Mr. M. D. C., aged 59, who in his day had been an intelligent, well educated man, and quite a political speaker. Along with his political speechmaking he drifted to drink, and in that line went from bad to worse.

About a year ago he developed symptoms of softening of the brain. The family had gotten into straightened circumstances, and could not provide him with as much drink as he desired. Mania set in, and next he became a dangerous, raving maniac, two men being unable to manage him, though when himself he could not walk from one room to another. He was locked up and ordered to an asylum.

The day before he was to be taken to the asylum he became as meek as a lamb, ceased eating, coma developed, and he died the eighth day without regaining consciousness. For the last month of his life I administered hyoscyamus almost exclusively. Beginning with a small dose, I increased it until I gave a teaspoonful every four hours of a mixture of three drachms of the specific hyoscyamus in two ounces of water. This was well tolerated by the stomach and had a good effect. The twenty-four hours of his tantrums I suspected that medicines were not given as directed, letting him escape entirely from its influence.

In cases following abortion, where the patient is nervous, sleepless and cannot rest, it is the remedy par excellence.

The more you use it and study its action, the better you will like it. One has to use it for a time and study it closely to be able to appreciate its good qualities.

KALI IODIDI IN THE LATE LESIONS OF SYPHILIS.

LYMAN WATKINS, M. D., BLANCHESTER, OHIO.

The late lesions of syphilis are neoplastic for the most part, but osteoperiostitis, rheumatism, cranial and nervous affections are also of frequent occurrence. Gummata of the meninges of the brain, testes, liver, spleen, kidneys, or periosteum, may occur months or even years after the secondary manifestations of syphilis have subsided, while tabes dorsalis and paretic dementia generally occur long after all the other symptoms have passed away.

There is no question of the fact that potassium iodide, in sufficient quantities, will relieve the tertiary symptoms of syphilis more rapidly than any other known remedy. Neoplasms yield to this drug when properly administered in large doses. The size of the dose will vary according to sex, age, physical conditions, and the resistance offered by the virus. It may be necessary to administer from twenty to one hundred minims of a saturated solution of kali iodidi three times a day, to be given well diluted with water. There are rarely untoward results following large doses of this remedy, and the writer has given from fifty to one hundred grains repeatedly, and in special cases as many as one hundred and twenty grains three times a day, not only without harm, but with the most gratifying results. In the writer's experience with patients of varying ages, sex and conditions, no ill effects have occurred from the use of the potassium iodide in large doses, copiously diluted with water. Indeed, it is better not to use the remedy than to give it in small, inefficient quantities.

In those pains so characteristic of syphilis, usually tibial, and coming on at night, in which the patient exhausts the vocabulary in describing their hammering, splitting, boring, crushing nature, there is no remedy which will give such complete and permanent relief as kali iodidi in doses of from fifty to one hundred grains in one pint of water, thrice daily, one hour after meals. The pains are caused by gummatous growths between the firm, unyielding periosteum above and the bone beneath. The remedy resolves the neoplasm and efficiently relieves the pain.

Cases of pulmonary syphilis in which the diagnosis of phthisis has erroneously been made and hope abandoned, some-

times make complete recovery under heroic potassium treatment. The same may also be said of severe and serious syphilitic laryngeal affections, extreme damage being repaired in some cases to an extent seemingly impossible.

Syphilitic paraplegia, if the neurons have not been destroyed, is amenable to this form of treatment, and in fact kali iodidi appears to be the only remedy that will favorably influence this neurosis. Syphilitic affections of the brain, meninges, cord, or peripheral nerves always require internal treatment, and kali iodidi is the remedy most efficacious. It is in cerebral and meningeal diseases of syphilitic origin that the largest doses of this remedy have been given and the most brilliant results attained. In extreme cases of gummatous lesions, involving brain structure with coma and pressing evidences of collapse, from one to two ounces of the potassium salt has brought about a cure in conditions apparently hopeless; also in cases of pachymeningitis of a grave type, the administration of this agent in apparently enormous doses has been followed by good results. In these cases, as well as in all others, care must be exercised to detect any symptoms of iodism, which, however, are not likely to occur.

No case of syphilis, however serious, should be abandoned or considered hopeless until kali iodidi has been given a full and thorough trial. The beneficial results which may be accomplished by the medicine are unequaled. Very little fear need be entertained of injurious consequences, since even when iodism occurs, suspension of the remedy will soon relieve the symptoms. There are few diseases in which complete recovery follows such apparently hopelessly conditions, entire restoration sometimes occurring when destruction of parts appeared total.

The lesions of syphilis designated as "late" or "tertiary" may occur early in the course of the attack. Kali iodidi should be given whenever we have gummata to contend with, late or early, and always in the largest doses well tolerated, and continued until all traces of the lesions have disappeared. The amount to be administered depends upon the condition present at any given time. In ordinary cases, presenting no urgent symptoms, the dose will vary from ten to thirty grains three times a day, but in emergencies the size of the dose may be gradually increased to an enormous extent or until favorable symptoms occur. The virulence of the syphilitic process must be overcome before adverse constitutional effects are manifested. When the

urgent symptoms disappear, the size of the dose may be diminished or the remedy suspended.

The various combinations of stillingia, rumex, sarsaparilla, etc., with kali iodidi, are of doubtful value. The chief reliance should be placed upon the kali iodidi alone, in saturated solution.

HYOSCYAMUS. ERGOT.

F. J. NIFER, M. D., BRIMFIELD, IND.

Hyoscyamus is a reliable narcotic, anodyne, sedative and antispasmodic. It does not produce constipation as does opium, but oftentimes acts as a laxative. It is a stimulant and also allays irritation, acting upon the cerebro spinal centers, producing sleep. Occasionally we find cases where it produces opposite effects in same sized dose, producing sometimes delirium as if the person were intoxicated. I found two such cases in a hundred treated. In large doses, hyoscyamus dilates the pupil, but does not arrest secretion as morphine does.

Uses: In hepatic colic from obstruction of the gall duct, passing of gall stones, renal colic, neuralgia, rheumatic pain, and inflammation of any of the serous membranes accompanied with more or less pain and insomnia from simple cerebral hyperæmia. From an experimental view we would conclude that in very large doses hyoscyamus is not so much of a narcotic or soporific as an anodyne, for it benumbs the hindlegs of dogs and the lower limbs of man, depressing the spinal functions, and acts as a cerebral excitant and a mydriatic.

Dose of the specific medicine is from one-half drop to five drops. Hyoscyamine, 1-60 to 1-100 grain, hypodermically.

Its soothing influence, to induce sleep, especially in infants and the aged, is best obtained by very small doses, frequently repeated. A teaspoonful every twenty or thirty minutes of a mixture of five drops in two ounces of water will exercise a delightful influence if begun early.

ERGOT.

The therapeutical action of ergot is usually prompt. As a parturient it is probably the most generally used of any, but it should be avoided when the os uteri is rigid and fœtus high up, as it endangers the life of the child. It is only to be administered when the parts are soft and relaxed, the child well down, accom-

panied by a lack of uterine energy, and when two or three grains of quinine (repeated in an hour) does not bring on regular labor pains. In menorrhagia, if ergot is too long continued it produces scanty secretion of the urine and a high color; also coldness of the skin, pinched and shrunken, with a leaden color, as if exposed to cold—cyanosis. I gave, in an emergency in profuse uterine hemorrhage, twenty drops of the fluid extract of ergot, hypodermically, which produced palpitation of the heart, dyspnœa, numbness of the upper and lower limbs, dizziness (vertigo), tinnitusaurium, dimness of vision with black spots before the eyes, faintness, the patient feeling that she was dying. I administered, hypodermically, 1-60 grain strychnia, nitroglycerin solution one minim, and digitalin 1-100 grain. I believe it was the ergotic acid which produced the above effect. The aseptic ergot deprived of the ergotic acid did not produce it.

THE CHLORIDES IN MEDICINE.

A. F. STEPHENS, M. D., ST. LOUIS MO.

The principal chlorides that are used in medicines are: Ammonium chloride, ferric chloride, potassium chloride and sodium chloride. These, with the exception of potassium chloride, have been long used in the treatment of the sick.

Ammonium Chloride: This salt originally came from Egypt, where it was obtained by sublimation from the soot resulting from the burning of camels' dung used for fuel in that country. It has long been known in China, where it is obtained from the water of certain volcanic springs. It is found in the fumeroles of volcanoes and in the cracks and fissures of recent lava streams. It is derived also from the manufacture of coal gas and boneblack as a by-product.

Chloride of ammonium is a white, translucent, tough, fibrous salt, occurring in large cakes as seen in commerce, and often marked with iron stains. It is little subject to adulteration, although as ordinarily prepared it contains ferrous chloride.

For prescribing, the granular salt should be used. This is a snow-white crystalline powder, permanent in the air, having no odor, a cool, saline taste, and slightly acid in reaction. It is soluble in three parts of water at a temperature of 60 degrees F., and in 1.37 parts of boiling water. It is very sparingly soluble in alcohol.

Medical Properties: The properties that are worthy of notice are: Stimulant, resolvent and deobstruent. It is deobstruent because it is resolvent. The remedy being both stimulant and resolvent, its range of action embraces those diseases presenting an accumulation or deposit of mucus, fibrin, or albuminous fluids. Hence we will think of it in bronchitis, pleuritis, peritonitis, peri- and endo-carditis and pneumonitis, when resolution is tardy and incomplete. In fact, we will not forget this remedy in all inflammatory diseases, especially of the serous membranes. We do not use it during the active stage, but in the stage of resolution or clearing up. This stage is frequently prolonged, and in many cases, such as pleurisy, there is often an effusion which is not readily absorbed, and the patient lingers in a weakened condition, and paracentesis must be resorted to. During the active stage of all inflammations it should be our endeavor to cut short or limit the inflammatory process and, if possible, curtail exudation. To lessen inflammation is to lessen the amount of exudate from serous and mucous surfaces, which is to also lessen the amount of accumulation in cavities and check the infiltration of tissues.

After the active stage has disappeared, having been hastened by the use of the special sedatives, we will then use the chloride of ammonium to facilitate recovery. In the latter stage of bronchitis, when there is more or less profuse expectoration of mucus, or in case of pleuritis after exudation in the pleural sac, the administration of this remedy will clear up the air-passages by checking the excessive secretion of mucus. In pleuritic effusion the remedy seems to have the power to aid in the disintegration of the sero-fibrinous exudate, thus preparing it for speedy absorption and elimination; and as the result of all inflammation of the membranes is the same, we will expect to obtain the same result in all.

In the latter stage of pneumonitis, during the period of resolution or the disintegration of the material exuded into the air-cells and bronchi of the affected lung—that is, during the stage of gray hepatization—the chloride of ammonium does much good. It is an excellent remedy in phthisis where there is profuse secretion and expectoration. In rheumatism, after exudation and infiltration of the tissues about the joint, it is of great value. It has been recommended very highly for neuralgia, but in this disease I am unable to bear testimony.

The specific indication for the chloride of ammonium is a

fibrinous, sero-fibrinous, mucous or albuminous exudate or infiltrate anywhere.

To conclude this remedy I will relate a case. Miss S., aged 23, was attacked by what was said to be "grip." Six weeks after she presented the following condition: Pale, sallow skin; difficulty of breathing; respirations increased in number to forty; pulse rapid and weak; tongue coated yellowish-white; loss of appetite. On inspection the chest was found to be full and rounded, presenting an effusion on both sides. Percussion showed dullness extending upwards to the axillæ. There was considerable dyspnœa. Ausculation gave an absence of breathing sounds; diminished vocal resonance, and œgophony. Temperature slightly above the normal. Upon close questioning, a history of an acute pleuritis was brought out. A few days later a hydroperitoneum appeared to complicate matters. The attending physician asked me to see the case with him, which I did, finding the patient as above described. I advised the use of ammonium chloride in connection with nux vomica in small dose to furnish moderate stimulation. The patient made a rapid and complete recovery. The improvement was so speedy that the doctor was himself surprised. This is one of several that I could relate.

Ferric Chloride: This is one of the chlorides that has been used in medicine for a long time. It is used in the form of a tincture, and is made by mixing thirty-five parts of solution of chloride of iron with sixty-five parts of alcohol.

The use of this remedy has been so common that it long ago became a household remedy. In times past the physician gave it in huge doses. From the amount of iron taken by the patient one would think that his alimentary canal would have become ironclad and non-destructible. It was poured down the throats of the sick in teaspoonful doses until it blackened the entire tract and its contents. It set the teeth on edge and shrivelled the mucous membrane of the mouth and throat, and in order that the remedy might not destroy the teeth, it was often administered through a quill. In olden time they sought the cyclonic effect of remedies.

The chloride of iron is useful as a medicine, but its field of action is limited. The indications for the remedy are as follows: "Deep red color of the part; an erysipelatous redness; tongue a deep red." Taking these indications as a guide, we use the tincture of chloride of iron with satisfactory results in erysipelas. I believe that we obtain the best results in inflammatory diseases

where we have the indications above and where the trouble is of a very active type.

We will find this remedy available in diarrhœa and dysentery when the mucous surfaces and tongue are characteristic in appearance and when the discharges are mixed with blood. In passive hemorrhages from the stomach or bowels, or from the kidneys and bladder, or from the uterus, it is often our best remedy. In a case of hemorrhage from the stomach, where the patient nearly bled to death, the hemorrhage was stopped almost immediately by the administration of the tincture of iron. I have used it with benefit in enuresis, and in a case of polyuria it gave prompt relief. The remedy has not to my knowledge been recommended for the latter difficulty.

The medicine should be given in very small doses, as it does not require much iron to supply the wants of the body.

As a local application it can be used with certainty in aphthous ulcers in the mouth; in chancroid ulcers, unless very irritable or inflamed and indurated, when this remedy acts as an irritant, and should not be used. Painted upon the tonsils, in chronic enlargement of these glands, it will reduce them in size.

Potassium Chloride: This chloride is not used extensively in medicine. Dr. Schussler gave it prominence in his work on "Tissue Remedies, The Bio-Chemic Treatment." He claims that the molecular disturbance of this cell-salt results in a fibrinous exudate. This fibrinous exudate is the specific indication of potassium chloride. Therefore this remedy finds its place in croupous and diphtheritic exudations; croupous inflammation of the lungs; pleuritic effusions; bronchial exudates, etc.; diarrhœa and dysentery with admixture of mucus. Fibrinous deposits in the interstitial tissue are absorbed more rapidly under its use; hence we will think of this remedy in mastitis lymphadenitis and erysipelatous swellings. I have prescribed this chloride with great satisfaction in diphtheria and scarlet fever, especially when there has been glandular infiltration. It is to be thought of in tonsillitis. I have used it for aphthous difficulties in children and in goitre with benefit. In some cases the goiter disappeared, while in other it seemed to have no effect. In non-suppurating bubo it is often of much value in reducing the gland to its normal condition. In the stage of gray hepatization in pneumonia it will hasten the act of resolution by hastening the disintegration of the exudate. It is to be thought of in mumps, as also in orchitis.

The diseases mentioned above point out the class of cases. They all belong to the group of exudative diseases. One other disease in which I have used it with some benefit I must mention. This was in a case of epilepsy. In this instance the effect of the remedy was to keep off the attacks and lengthen the intervals between them. Before taking the potassium chloride the patient was having an attack of grand mal about once every thirty days. After beginning the treatment he was free from them for as long as six months at a time. I lost track of the patient, and do not know what it might do if we could succeed in a protracted course of the medicine.

The specific indications are: Tongue coated grayish-white and slimy; glandular infiltration and fibrinous exudate.

Sodium Chloride: This salt is nature's great preservative and antiseptic. It is found throughout her entire domain. It exists naturally in the solid state and in solution. In the former it is found in extensive beds and great mountains are built up of it. In solution it is found in certain springs and lakes as well as in the waters of the ocean.

This salt, taken into the stomach, passes quickly into the blood, and the excess is soon thrown off by the kidneys. A salt regimen has the effect of increasing the weight and strength of the body, and when under the full effect of it the blood is found to contain more of the corpuscles and salts and less albumin and water.

The older writers classed this salt as stimulant, tonic and anthelmintic in small doses. In large doses it is purgative and emetic.

It was recommended as a good remedy in intermittent fever. It was first noticed as an antiperiodic in 1850 by Mondezert, of Chareton, and reported upon favorably by Mr. Piorry. Since that time its efficacy in malarial types of fever has been attested by Dr. Lattimore, of New York; Dr. Hutchinson, of Brooklyn; Dr. Moroschkin, of Russia, and others. In some cases the spleen rapidly diminishes in size. The method was to administer from eight to twelve drachms in divided doses during the apyrexia. In doses of a teaspoonful it has been given as a styptic in hemoptysis. It is to be taken dry in such cases. Externally it has been used mostly in solution as a stimulant bath.

Why and how did it act as an antiperiodic? Let us consider this question for a moment. In malarial difficulties there is a rapid destruction of the red blood cells. This evidently takes

place during the apyrexia. This destruction of the organized structures of the blood releases the vital force from the broken-down blood corpuscles, after which chemical action is very rapid. The result of decomposition of the blood-cells is to poison the system. The eliminating organs are incapable of throwing off the waste as fast as it appears, and by the end of twenty-four hours, more or less, according to the violence of the internal storm, it ends in a cyclone termed a chill. If the destruction of the elements of the blood is not so rapid, we have the chill only once in two, three or four days. If it be extremely rapid, we may have a chill every day. If the skin and kidneys were able to eliminate the morbific elements as fast as they were formed, there would be no chill.

What the changes are which are going on in the body during the chill I would like to determine. Whatever the changes are, they are sufficient to destroy for the time the noxious effects of the accumulated broken-down material in the system and to prepare it for rapid elimination from the body through the skin and kidneys; hence we have the profuse sweats following. I cannot help but remark in passing from this subject, that the phenomena attending a revolution of malarial fever are of intense interest to me and that it holds within itself a vast secret.

Sodium Chloride is highly preservative and antiseptic. If taken in large doses it quickly passes into the blood, as we have seen, where its effect is primarily that of a preservative. Its first effect is, therefore, to stop the destruction of the red cells, and the next is to act as an antiseptic in modifying the poisonous activity of the already broken-down corpuscles, and, if the blood current is not already overcharged with floating lifeless material, it will "stop the chill. Hence the treatment is according to reason and certainly seems scientific.

Later writers, notably Schussler, formulated the following: "The presence of sodium chloride regulates the amount of moisture in the solids and the watery constituents of the fluids of the body, hence it is curative when there is a disturbance of secretion and excretion marked by excess. The specific indications are: Tongue has a clear, slimy appearance, or small bubbles of frothy saliva upon it; involuntary flow of tears, or watery discharges from the mucous membranes. Taking these symptoms as a guide, we use the remedy in anemia, blistering eruptions upon the skin, cold in the head, with free watery discharges from the nose; diarrhœa, with large watery stools; cholera morbus, etc.; exces-

sive drowsiness with dribbling of saliva; indigestion with vomiting of clear frothy water; typhoid fever with watery stools and great drowsiness or tendency to coma.

I have used the remedy in diarrhœa of small children where there was the characteristic watery stool, with splendid results; the character of the discharges changing rapidly and recovery soon following.

In the use of this remedy, the dose should be small, except in intermittent fever. Here it must be used in large doses. For other diseases in which I have used it I selected the very small dose, the 3x trituration in five grain doses, as often as necessary.

It will pay to make a close study of this chloride with reference to its therapeutic uses.

SODIUM CHLORIDE.

J. PAUL HARVILL, M. D., NASHVILLE, TENN.

An important remedy too often overlooked is sodium chloride or common salt. While it is an essential constituent in the animal economy, and hence a food, it is none the less a remedy. The inexhaustible supply and the common use of this remedy for household purposes renders it convenient as well as efficient.

When a gentle emetic is needed, either from narcotic poisoning or overloaded stomach, dissolved a few grains in a cup of warm water and drink slowly. It will not always produce emesis, but will in the majority of cases.

I like its action as a gentle laxative, and use it quite often for this effect. Usually I direct a teaspoonful to be taken upon rising, in a glass of cold water or sulphur water. I could recite several cases cured in this way. For sick-headache I have used salt with advantage. For this purpose I direct the patient to eat a teaspoonful, three or four grains as a time, drinking water if desired. This will start peristalis in the stomach and intestines and will stimulate the portal circulation in this way. Often I have seen this relieve promptly. You can often relieve nausea and vomiting by throwing a small amount of a weak solution into the lower bowel, when there is no structural disease of the stomach.

Children are greatly benefited by this remedy if there be a general atonic condition, during the second summer. I have seen

them take on flesh and vitality by adding a few grains of salt to their food each time. Hemoptisis in a majority of cases can be relieved by salt and nutmeg. I use it confidently for this purpose. Catarrhal conditions of the air passages are benefited and ofttimes cured by spraying or flushing with a warm salt solution. I use it exfensively in diseases of the eye to cleanse for the application of other remedies.

It is perhaps useless for me to mention the importance of the normal salt solution. We are all familiar with the solution and its uses. I have seen patients resuscitated when it seemed to me impossible. Its principal use is in collapse from operations and from loss of blood from any cause.

Locally in periostitis or in other deep inflammations I make a solution of salt and vinegar and apply on absorbent cotton, held in place by a bandage if on the extremity.

For infantile diarrhœa with intestinal pain, peach tree leaves, well bruised, put into a sack made of cheese cloth, and wet every two hours in a vinegar and salt solution, will give prompt relief. Salt water baths in dropsical conditions should not be forgotten. Hot salt applications should be used in intestinal or uterine colic, for it possesses more virtue for this purpose than other hot applications.

Schuessler contributes the virtue of relieving sunstroke, surely and quickly, to the 3x triturate of common salt. He also claims to have relieved delirium tremens very promptly with this remedy. The leading indication for the administration of this drug in this infinitesimal dose seem to be watery discharges from any part, from the lachrymal sac to the alimentary canal.

I have found some benefit from the 3x trituration in excessive watery discharge in infantile diarrhœa.

CARBO LIGNI.

C. E. BROTHERS, M. D., MINERAL CITY, OHIO.

Wood or vegetable charcoal is formed when wood is submitted to slow combustion in a limited supply of air.

For medicinal use charcoal should always be purified. Louitz says this may be done by filling a crucible with fine common charcoal and cementing on a cover with several orifices. The crucible is then to be exposed to a red heat and to be continued so long as flames of a blue color issue from the orifices. When the blue flames have ceased, remove the crucible from the fire, and when sufficiently cool place the contents of the retort in glass vessels as quickly as possible and keep well closed.

The best kind of charcoal for medicinal use is that which has been properly prepared from young willow shoots.

Indications and Uses: Profuse menses; salty taste in the mouth, with profuse watery secretions and nausea; sour or putrid eructations; passive hemorrhage from the uterus, stomach and bowels; hemorrhage from the bowels in typhoid fever; pallid, expressionless tongue, the tongue having a coating which may come off in patches, showing a tendency to hemorrhage; leucorrhœa, when associated with passive hemorrhage, the flow prolonged and recurring too frequently; pallid and transparent skin; acidity of the stomach, with offensive breath.

Prof. Scudder says that charcoal is an absorbent disinfectant and an antiseptic, and that its specific use is to arrest hemorrhage of the bowels. How it arrests hemorrhage I cannot tell; that it does it I have the evidence of my own experience.

I have used carbo veg. to control hemorrhage of the bowels in typhoid fever with the very best results, checking it every time. It is used by enema, one to two drachms, finely powdered, in four ounces of lukewarm water, used as often as necessary.

I have used carbo veg. with much success in excessive lochia. Generally the lochia requires no interference. It is only when its condition affects the health of the patient that medical attention is needed. It is in these cases that carbo veg., given in doses of ten to thirty grains, will control it in a very short time.

For ordinary nose-bleed there is no other remedy that I know of that will give the good and satisfactory result that charcoal will if we have the indication for the remedy, which we nearly always have in these cases.

Mr. J., a coal miner, aged 22, came to my office in January, 1902. He said: "Doctor, I have been having hemorrhage from the nose for years at short interevals, and I have tried many doctors and many remedies, with the same result—no benefit. Can you give me anything that will cure me?" The first remedy that came into my mind was carbo veg., because there were strong indications for it. I gave the medicine in five grain doses four times daily, with the happy result of making a complete cure.

Charcoal has a wide field of usefulness in medical practice. That it has been a much neglected remedy is proven by looking back over our files of medical journals. I do not see in any of them an article setting forth the value of this excellent remedy—one that every physician should carry in his medicine case.

ELATERIUM.

GEORGE D. COE, M. D., CARTHAGE, MO.

Of this remedy it is not necessary to say anything along the line of its usual use. All physicians of the Eclectic School are familiar with its properties and use as given in "Scudder's Specific Medication," and its indications and uses are plainly given on the labels of every bottle sent out to the profession by Lloyd Bros., and also by Merrell on his Normal Tinctures.

I desire to speak of its action along a different line, and one of which little or nothing has been said; that is, as a local application to the os in sub-involution of the uterus alone, and where there is an endo-metritis accompanying it. With sub-involution there is an œdematous condition of the uterus, and it is a well known fact that œdematous tissues will not readily heal, neither do they of themselves take on healthy action. Another complication that is present in these cases is an inflamed condition of the mucous membrane covering the os, sometimes amounting almost to ulceration. In these cases elaterium, a drachm to the ounce of glycerine, will act like magic in relieving the womb of the superabundance of water and will stimulate it to healthy action.

My method is to saturate a small bunch of absorbent cotton with the elaterium and glycerin and apply it through a speculum to the mouth of the womb. This will produce a free watery discharge. The woman is relieved of the dragging down sensation in the pelvis and is greatly gratified with the quick improve-

ment. In about twelve or sixteen hours the tampon should be removed, when the flow of water will have ceased. A douche of salt water, as hot as can be borne, best taken at bedtime, may then be used.

The cotton, saturated with the elaterium, should be applied every third day until the uterus is reduced to its normal dimensions and conditions. In cases where it is not convenient for the patient to come to the office, the medicated cotton can be encased in a gluten capsule that will hold half an ounce, or as near that as can be obtained, and the bunch of cotton should be large enough to fill the upper end of the vagina so as to envelope the mouth of the womb. It most cases it will be necessary for the patient to wear a napkin to take up the discharge, it will be so free.

Care must be taken not to apply it to the pregnant uterus, as it will cause an expulsion of the contents.

It is valuable in women passing the change. By its use at this time, instead of a woman dragging along three or four years, it is soon passed by, the uterus being forced to its normal condition and size.

PHYTOLACCA DECANDRA.

GEORGE A. FABER, M. D., WATERBURY, CONN.

Specifically this is an excellent remedy in glandular inflammation, as an alterative, in rheumatism, the squamous variety of skin diseases, mammitis, tonsillitis, orchitis, diphtheria, and in ulcerated sore throat. It is the most useful in the materia medica.

The past Spring I had a number of severe cases of parotitis in which this remedy proved its superiority. Mr. C., aged 24, developed parotitis. On my first visit found the glands very much inflamed, with a high fever, heavily coated, dirty-white tongue, and sore throat. After my second visit double orchitis developed. On my first visit I gave fluid extract aconite and veratrum minims xv, phytolacca ʒ iii, aqua pura ℥ iv; ʒ i every hour. Also five grains of sodium sulphite every four hours. The orchitis required poultices for several days. After the fifth day the fever had subsided, and in two weeks the phytolacca had reduced all the glandular trouble.

In tonsillitis and diphtheria this is the reliable and important remedy. I use Merrell's fluid extract and give it in from five to ten drop doses every two to four hours. As an external application in phagedena and ulcerating skin diseases it is also very valuable. In rheumatic fever, after the inflammatory stage has passed, this remedy acts wonderfully in relieving the stiffness of the joints and soreness in the muscles. It is one of the most important remedies in the Eclectic materia medica.

CENTRAL SPECIFICS.

M. H. LOGAN, M. D., SAN FRANCISCO, CAL.

Every plant has its specific virtue; some plants have several different principles; out of any number of such, included in any one plant, there is usually but one that is recognized as very prominent, and this one we will call, for convenience, its central specific principle. Take for example the salts of opium. Out of its twenty-four different alkaloids there are only three of any particular use. It is hardly worth naming them, for morphine, codeine and apomorphine are common things. All plants have more than one principle, although we recognize but one as a rule. This characteristic is always the same in the same kind of plant. If man be the microcosm of the universe, then he will contain all of the symptoms of the universe; the potency of this we find in him in a more or less latent if not objectified state, at least in the imaginations and emotions; which many philosophers now consider material things.

Although a human being is looked upon as one perfect whole, yet for practical purposes we have to look upon him as so many more or less independent parts, each part or organ with its own specific function. Now, the vegetable kingdom, taken as a whole, may be compared to one human being. Within this human "variety in unity" there exists the potency of the whole vegetable kingdom taken together. The positive end of this universal life is in the human economy, while the negative is in the vegetable kingdom. Each animal organ or function has its corresponding analogue in some species of plant. The little plant mandrake has a specific principle with which you are all familiar, the activity of which is similar to the animal liver; in fact, it may be called the liver of the vegetable kingdom, it being the negative

pole of the one entity. There are other specifics for the liver similar, but not identical with podophyllum, in other plants. These are leptandra, iris, chionanthus, and chelidonium, each one having a slightly different action from the others. All these and others of the same class are looked upon as one group, and will represent the liver of the vegetable kingdom. There is a separate remedy for every phase of liver function; but podophyllum is the principal one, therefore called the liver specific. Take an example of the animal heart: it is represented on the vegetable plane by such plants as cactus, digitalis, strophanthus, lycopus, and adonis, the central one of which will usually be found between cactus and digitalis. All these and others of the class taken together will represent the composite heart of the vegetable kingdom, and may be looked upon as the analogue of the animal heart.

For the nervous system in its intricate and tortuous convolutions and conjunctions, and universal superintendency, there is no single specific, but each symptom has its analogue in the vegetable kingdom. The one of most general use is the special sedative gelsemium, chief of its class, and the center of a large group. A few others of this class of considerable importance are belladonna, rhus tox, pulsatilla, hyoscyamus, and passaflora. Likewise the glandular system is represented on the vegetable plane by such principles as phytolacca as the central specific, surrounded by its little family of secondary or tertiary specifics. So with all organs and their functions, including normal and abnormal activities: all will be found to have their analogue on the vegetable plane.

The philosopher says that nature knows its own; the physicist says that unlike poles attract and like poles repel. Now the Homœopathist says that "like cures like." Some folks say "microbe" and "antitoxin" or *"oponens oponendi."* To me this "specific" way of looking at it seems more reasonable. It is at least methodical if not ultra-scientific.

It seems that a large amount of the medical teachings of to-day tends to scatter too much; we are drawn away from the foundation principals too far. Many get lost in a therapeutic wilderness. We should frequently drop back to the main road and advance cautiously. I know this is a homely method, but it is safe.

Like creeds in religion, there will always be creeds in medicine; for it is not given to man that he should comprehend

all knowledge on any one subject in one short life. As universal knowledge is many sided, and each facet throws a different kind of light, so, like the knights of old, each one will fight for his favorite side of the shield.

Human minds are not all on the same level. Many human beings are but little above the animal in all but form; with them matter is yet supreme, and brute force only prevails. There is no intellectual gap or mental gap between the lower animal and man, not even a physiological or therapeutical one; every single step of the way is filled by immense herds of beings in human form. Many of the brute creation are known to be more humane than many of these beings in the form of man. The physician is supposed to understand the mental and physical condition of the whole lot. Therefore the doctor should classify his weapons, the medicines, in a very convenient manner.

Every group of organs in the human economy has its center, with its central or chief and remote functions. You are all familiar with the organs of digestion, the alimentary canal and its subsidery or dependent (adjunct) organs. Even the dependent organs have others dependent upon them; each dependent organ may be looked upon as a smaller center; these secondary organs are all convenient appendages developed out of the primary alimentary canal during the course of evolution. During the past ages these appendicular organs developed from the progaster in the early forms of life, the successive steps of which may be seen to-day in the protozoa, polyp, amphioxis, and annalides.

It is frequently convenient to look upon the secondary organs as primary, particularly in cases of metastasis of disease or vicarianism; or it may be convenient when primary symptoms have subsided and secondary ones have progressively developed.

Special extraneous circumstances and injuries occasionally cause a secondary organ to become the primary seat of trouble, or a primary function may cease to act as such; then a secondary one frequently takes full charge of the duties; then the secondary remedy becomes the primary. This is where some skill is required, for a primary lesion may cause a secondary; then the primary recovers and the secondary remain or perhaps grows worse. A tertiary condition may also occur and take the place of the primary. To understand these lesions is to understand pathology, and that is not our present object; we want to look to the specific conditions of the remedy.

Class diseases, those of the same class at least, should be treated to class remedies. The old-time synergistic arrangement was a groping in the right direction; our modern specific classification is far on the road toward perfection. Fifty years or more ago materia medica was chaos, made up of a mass of emperical and isolated probabilities and opinions, incongruous and unsystematised. When the old school synergized, they made a step in the right direction; when the Eclectics classified according to specific indications, they reached as near to perfection as possible to imagine.

There are about ten primary groups of disease, and ten subsidery ones. A convenient classification is about as follows:

1st. Febrile and Infectious.
2nd. Respiratory.
3rd. Digestive.
4th. Genito-Urinary.
5th. Nervous and Mental.
6th. Skin and Glandular.
7th. Constitutional and Chronic.
8th. Children.
9th. Female and Obstetrical.
10th. Bone and Surgical.

Nature does not always mark them off as plain as the above list; several may be associated at the same time; different phases of one may simulate several kinds.

As a rule, children should be the most natural to treat, as they are not usually subject to bad habits nor very unfavorable surroundings. Now, a convenient classification of remedies would be one to correspond to the above list. Therefore first febrile conditions; the remedies should be the arterial sedatives, or those medicines influencing the circulation and temperature. Aconite is generally the central specific here, to be followed by or alternated with any indicated one from any group. Now the condition is one for gelseminum, and it becomes the central specific, around which others gravitate in their varying degrees of indication. Belladonna will occupy the central place in its kind of a case. In febrile and infectious diseases one or two of the above are more generally centralized than several. The most usual primary sedative may become secondary, or even tertiary, following varying conditions. Others of this class that are particularly well marked are veratrum, asclepias, and jaborandi.

In the next class, that of respiratory diseases, we make a similar arrangement. Excluding those remedies usually indicated in both classes, we will take lobelia as the most nearly central specific of this group. All others will approach this one in order of their fitness for the specific conditions. Now, conditions may become so nearly reversed from the usual order that the least specific of any of its class may become the first. All specific conditions belonging to any one class of disease will be met by all remedies belonging to that specific group, in a perfectly serial order, each one fitting the symptom more or less perfectly, according to its position in its series. In a very slight cold the most usually remote one of its class is now the central specific. Euphrasia will probably be that one. Every pathological symptom of the respiratory organs and circulation will be met by one or more of the respiratory remedies. That one which fits the specific condition best is its central specific; all others are secondary, tertiary or still more remote. Prominent in this group stand ipecac, bryonia, aconite, and most all those of a balsamic nature.

The actions of groups of remedies, like the diseases with which they are co-related, merge into each other by such fine gradations that there is no division line between them; but certain general similarities are recognized: the same with the groups of diseases. For the sake of convenience we are obliged to separate the groups distinctly, remembering all the time that it is an artificial arrangement and somewhat arbitrary.

This scheme can possibly be better explained with the alimentary group of remedies, the first sub-class of which is the evacuates. Here we have a perfect gradation from the feeblest nausient to the most powerful cathartic; or reversing the action, we have the most powerful emetics down to the feeblest laxative. Amongst the chief specifics here will be found nux, podophyllum, colocynth, and baptisia.

Take the group of nervines: from conditions of slight nervousness to mania, the remedies will run from pulsatilla to hyoscyamus. Let the condition be from a mild vertigo to a profound delirium, the remedies will be found in the group running from cactus to stramonium. The central specific is not always easily found; but it is always there and always ready. Other very prominent ones in this class are passiflora, rhus tox, valerian, conium, cannabis, and macrotys.

The symptoms of disease are like the wrappings of a long

string around a ball, wound in all directions, so that every revolution touches every other in one or more places. The indicated remedies follow the same apparently chaotic order; but like the wrappings of the twine, each one is a little more distant than the one before, and when unravelled, the symptoms, like the tangled skein, will show a legitimate order.

The glandular system is properly a sub-class of skin diseases, and its remedies take a similar position. Here phytolacca will usually be the central specific; others of prominence are iris, jaborandi, echinacea, etc. Sub-classes of all other diseases take the same course. It would seem that surgery had no place in such a classification; but when we come to look at the preparation, repair and topical treatment, it becomes an integral part of the scheme. Many of these pathological symptoms from the various classes of diseases are so mixed, co-related and reflexed, that there seems many times to be no one symptom more prominent than another; but a little medicine on general principles, some good advice, a good impression, and a little time, and the symptoms will tell their own story. When prominent complications occur, it may become necessary to alter the treatment suddenly; but it is always well to keep the primary conditions at least under partial medication. By metastasis the disease may have changed its locality, and require independent primary treatment; but the original condition, when known, must still be kept under surveilance. A primary condition should always be under special treatment, unless a medical case has become surgical, and the knife has taken the place of medicine.

By having a few classes and sub-classes of disease, and the medicines arranged in a similar manner, chaos becomes order, and the practice of medicine becomes a scientific certainty.

With a simple classification like the above, it becomes easy to arrange a pocket case of medicines. The most commonly indicated remedies are the arterial sedatives, of which aconite is the chief. It covers a larger field than any of its class, and should be the first in the case. Febrile symptoms attend every acute complaint, and usually require attention first. The pocket case should be prepared to attend to its most prominent symptoms. Gelsemium, belladonna, veratrum, etc., will sub-tend aconite. For the respiratory apparatus the central specific will generally fall in with lobelia, sanguinaria, or ipecac. These will fit more general symptoms than any others of the class. They should be used in conjunction with febrile remedies. For the digestive system the

central specific will usually fall in with either nux, chamomilla, or colocynth. The urinary system will centralize on or near apis mel, apocynum, sable serulata, and eryngium. The nervous system most usually calls for rhus, pulsatilla, belladonna, passaflora, and cannabis. The other five classes, with the exception of the last, are not usually represented in the pocket case. The last includes the knife, hypodermic tablets and syringe. The hypodermic case should have, amongst others, morphine, atropine, strychnine, glonoin, digitaline, pilocarpine, cocaine, and apomorphia. This will usually cover the field of nearly all emergency cases.

SOME OF THE OLDER AND SOMEWHAT NEGLECTED REMEDIES.

V. A. BAKER, M. D., ADRIAN, MICH.

In former papers I have written of the value of sanguinaria canadensis and its active principle, sanguinarine; also of nux vomica and ignatia amara, differentiating between the two remedies in a specific and curative sense, and of the efficacy of the latter in certain atonic conditions of the nervous system, especially associated with insomnia.

In this paper I am to extend this inquiry to other remedies.

Physicians remaining long in any given locality receive bountifully of literature recommending remedies (to physicians only) reaching every conceivable abnormal condition. Some of them are worthy of consideration for occasional use, to tide him over for the time, for often our patients have self-limited ailments. Again, our profoundest attention and best resources are demanded. Then it is that we need comprehend the action of remedies and their specificity—remedies that have passed the ordeal of uncertainty and are known to be as reliable as it is possible for remedial agents to be.

Crawley—*Corallorhiza Adontorhiza:* This remedy is indigenous to the United States, growing in woods about the roots of trees. I regard it worthy of study and test in cases where revulsive action is demanded. It is febrifuge, sudorific, nervine, diaphoritic. A remedy of rare excellence for children that sicken easily from indigestion, with fever and restless; and for women, young or old, who have such symptoms at the menstrual periods,

with or without pain. The American Dispensatory (King and Lloyd) states crawley to be probably the most powerful, prompt and certain diaphoretic in the materia medica. Its scarcity, and consequent high price, prevents it coming into general use. It is sedative, and promotes perspiration without producing any systemic excitement. It is valuable in fevers, especially when the nervous system is wrought upon, and in inflammatory conditions where pain is pronounced, as in inflammatory rheumatism or in the exhaustion conditions of typhoid fever or pneumonia. I have been gratified repeatedly by its use in subsultus of typhoid and other symptoms concomitant of conditions induced by constitutional wear. It is valuable in night sweats, and will relieve hectic fever without debilitating. As before stated, its expense has been and is a hindrance to its general use, costing in fluid form from $3.50 to $4.50 per pound. I get the root and crush it fine enough that hot water extracts its virtues. A heaped teaspoonful of this to four ounces of hot water forms an infusion of which I give a teaspoonful every fifteen or thirty minutes, or every one, two or three hours, etc., according to effect desired.

Cypripedium pubescens, or yellow ladies' slipper, is another remedy of value for abnormal conditions of the nervous system. I use cypripedine, triturated one part to ten of sugar of milk. This in one to five or ten grain doses an hour before retiring, in a little hot water, will produce generally a favorable effect in insomnia from over mental strain, or from that "fly-away" feeling that annoy so many nervous subjects. It may be given, if necessary, three or four times daily in addition to the nightly dose. As a nerve tonic the fresh root used in decoction, prepared fresh daily or alternate days, given according to rules laid down in our dispensatories, will give excellent results. A restudy of this valuable remedy will repay the careful and thoughtful investigator. The late Prof. Paine, in his work on new school remedies, says of cypripedin, the active principle of cypripedium pubescens: "With it wakefulness may be converted into quietude and sleep, mental anxiety into calmness, enfeebled and exhausted nerve force into tone and vigor." It acts charmingly in atonic dyspepsia, and is specific in conditions of the nervous systems wanting in nerve energy or functional disturbances, over mental work or worry. I have on my prescription shelf cypripedin, 1-10, and also a combination of equal parts of cypripedin, lupulin and scuttellarine, reduced in sugar of milk, 1-10, which I have found unequaled in sexual debility of either sex, given

three or four times daily in three to ten grain doses, dry on the tongue or reduced with a little water. With me this is a remedy par excellence, and I invite a careful trial of it. One one hundredth of a grain of strychnine may be added to this if indications warrant, but not to be given more than twice daily.

I have heretofore noted the specific value of populin, the active principle of poplar bark, or specific tincture of the same, or a good fluid extract. Its specific influence over the bladder, in fine, I may say over the whole mucous tract, is undoubted. I have tested this remedy in irritability of the bladder, even though the condition was dependent upon enlarged prostate, with notable success. When tenesmus exists, gelsemine added enhances its utility, and in catarrh of the bladder, vagina or uterus, hamamelis may be used, making a trio that will usually give good results. I have mentioned populin compound to this association several times before, and need only add that time and experience strengthen my belief and confidence in the compound, not only, but in the other remedies forming the topic of my paper, specifically considered.

REMEDIES USED IN EYE, EAR, NOSE AND THROAT WORK.

KENT O. FOLTZ, M. D., CINCINNATI, OHIO.

A few only of the most important remedies will be mentioned, as time is too short for a long article on this subject.

Boric Acid: This is probably the most generally used drug in eye and ear diseases. As a wash for cleansing the secretions from the eye, it is usually used in the proportion of two drams to a pint of water. When there is a tendency to pus formation, a mucopurulent secretion, a favorite is calendulated boric acid. The method of preparing this is as follows: ℞ Sp. calendula. Boric acid, of each a sufficient quantity. This is to be placed in a mortar and triturated until dry and free from lumps. The solution is prepared the same strength as the plain acid.

In suppuration from the ears, I use the dry calendulated acid, insufflating with a powder blower of the Devilbiss type. It should be remembered that under no circumstances should powder be packed in the ears.

Salicylic Acid: In dry eczema of the external auditory canal, in intumescent rhinitis or chronic rhinitis, an ointment of salicylic acid applied on cotton will be found curative in some cases, and will afford relief in nearly every case. In nasal diseases the tampon should be allowed to remain in an hour. In this way the mechanical action of the cotton is also an aid. The strength employed is generally twenty grains of salicylic acid (Lloyd's), white vaseline one ounce. Mix.

Glycerin: For rapid depletion of nasal tissues in edematous conditions, a tampon of cotton saturated with glycerin will be efficacious. The action of the remedy, however, is very transient, but will often be an aid in conjunction with other remedies. The drug is free from the objectionable reactionary features of cocaine and the suprarenal derivatives.

As a local anesthetic in operations in the external auditory canal, or on the membrana tympani, the use of a ten per cent solution of cocaine in equal parts of absolute alcohol and aniline pure (Merck's) has given satisfactory results. A twenty per cent cocaine solution has been employed, but the absorption is considerable, and it should be carefully used, as poisoning may result.

Specific Bryonia: In serous iritis, and also for promoting absorption of opacities in hyalitis, bryonia is valuable. In any affection where motion increases pain, and rest diminishes pain, bryonia is indicated. In supra-orbital neuralgia, sp. bryonia combined with sp. gelsemium will relieve in the majority of cases.

Specific Phytolacca: In glandular enlargement, whether of the lymphatic or mucous membranes, sp. phytolacca is the drug indicated. In follicular tonsillitis, parenchymatous tonsillitis and follicular pharyngitis, phytolacca will be found the best remedy.

Specific Podophyllum: In many cases an atonic condition of the alimentary canal will be found, and podophyllum will be found a valuable adjunct, if not positively curative, in many cases of eye, ear, nose, and throat diseases.

There are many drugs in general use that will at some time be found indicated in any of these diseases, but if benefits are to be obtained, the selection of the drug must be carefully made, not a haphazard guess.

In conclusion, it may be as well to speak of the danger of employing cocaine and suprarenal extract or its derivatives. Cocaine used locally in the nose will not only at times cause the cocaine habit to be formed, but will also, on account of its power-

ful constringing power, especially in those cases where the nutrition of the tissues is much below normal, cause a still lower resisting power, and may cause necrosis of the tissue. The same devitalizing process may result from the glandular preparations. Another fact that should be taken into consideration is that reaction is always equal to action, and where powerful constringing agents are employed, there will be a corresponding relaxation following, so that although there may appear to be some benefit derived from the use of these agents, I predict it will be found that the continued use of them will cause greater annoyance than the original disease for which they were administered.

A FEW FAVORITE REMEDIES.

JOHN W. FYFE, M. D., SAUGATUCK, CONN.

I will briefly call your attention to a few of the well known drugs which experience has taught me to regard as remedial agents of great usefulness. Possibly their curative powers is here over-rated, but I think not, for as my experience enlarges and a fuller knowledge of their properties is acquired, additional indications for their exhibition are constantly being seen. This fact would seem to suggest that our knowledge of these old remedies is still imperfect and that they are worthy of further study. The old remedies which I would at this time suggest for further study are belladonna, bryonia, cactus, gelsemium, and rhus toxicodendron.

Belladonna is a cardiac, respiratory and spinal stimulant, diuretic, anodyne, mydriatic, an irritant narcotic poison, or a paralysant of the motor nerves, according to the quantity of the drug taken. In doses large enough to dilate the pupils, it exerts an influence opposite to that obtained from the doses usually employed by specific medicationists, and of course does not meet the indications given in this paper. In small doses, belladonna is a remedy of the greatest value in all forms of congestion, and in the diseases of children it constitutes a frequently needed medicament. I have never seen a case of scarlet fever which did not call for belladonna as a part of a rational treatment. In many cases it is a prophylactic against this disease. The following specific indications I have found to be reliable guides for its employment: Dusky redness of the surface from capillary congestion;

patient dull and abnormally inclined to sleep; eyes dull and pupils dilated; dull, heavy headache; sleeping with eyes but partially closed; diseases of the brain when there is a sense of fullness, dizziness, drowsiness, and dull, heavy aching; deep aching of the loins and back, with a sense of fullness; incontinence of urine.

The dose of belladonna which I have found most curative in the foregoing conditions is obtained by adding from five to ten drops of the specific medicine to four ounces of water and administering it every hour in teaspoonful doses.

Bryonia is sedative, diuretic, antirheumatic and nervine, and, if employed in large doses, a drastic cathartic and heart depressant. In small doses it is a very efficient remedial agent, but in large doses it is worse than useless—it is decidedly harmful. In pleurisy or pneumonia, when effusion has taken place, bryonia in small doses will bring about absorption of the fluid in many cases which, without this remedy, would prove hopeless. Pleuritis, pneumonia, bronchitis, rheumatism and all diseases of the serous membranes, are among the most prominent abnormal conditions which usually present indications for bryonia. It is specifically indicated when there is difficult breathing, with painful, harrassing cough; in pneumonia when there is tensive, tearing, sharp or lancinating pain; in diseases of the serous membranes when there is tensive, tearing or cutting pain; in rheumatism when the pain is of a tensive and cutting character, and aggravated by motion; in inflammation of the mammary glands when there is costal pain and soreness; in headache when on the right side and extending from the forehead to the occiput, and when the pain is constant and severe, but without sharpness; in rheumatism about the joints when characterized by stiffness, soreness and swelling, and in paralysis following rheumatism; in profuse diarrhœa when the discharges are of a clay color, and in catarrhal conditions with acrid, burning watery discharges from the nose and when there is a frothy bronchial expectoration streaked with blood. In muscular pains about the chest it has afforded prompt relief.

The dose of bryonia must be small; from five to ten drops of the specific medicine to four ounces of water, a teaspoonful of the mixture every hour, furnishes a dose sufficiently large.

Cactus is tonic, diuretic and sedative. In very large doses it causes gastric irritation, confusion of the mind, hallucinations and slight delirium. In small and medium doses it is our most

valuable remedy in disease of the heart, whether functional or organic. It gives relief, and when continued for a reasonable length of time, effects a cure in many cases. In the treatment of so called "nervous" women" it is frequently of great usefulness. It tones up their weak hearts, and in this way removes many of their most distressing troubles. It also fills a most important place in the treatment of old people, and my experience teaches me that if anything will keep the old, weary heart in a condition to do its duty, cactus will do it. Excessive users of tobacco who suffer from a weakened and irritable condition of the heart should be given cactus. It will relieve many of their unpleasant symptoms.

The best effects of cactus are obtained by adding from ten to sixty drops of the specific medicine to four ounces of water and giving a teaspoonful of the mixture every one, two or three hours.

Gelsemium is sedative, antispasmodic, alterative, relaxant, emmenagogue and nervine. In very large doses it has caused death. In small or medium doses it is a valuable remedy in fevers when there is irritation of the nerve centers. It prevents determination of blood to the head and spinal cord, and checks spasmodic action. In convulsions it is a superior remedy. It may be administered hypodermically in doses of five to ten drops of the specific medicine whenever the conditions of the patient is such as to make this method desirable. In labor, when there is a constricted or pinched condition of the lower segment of the uterus, vagina and perineal tissues, accompanied by a rigid os uteri, gelsemium exerts an influence which soon restores the parts to a normal state. In the condition here referred to, ten drops of the specific medicine should be added to five drachms of water and one teaspoonful of the mixture given every ten minutes until the entire amount has been taken. In the treatment of children it constitutes a frequently needed medicament. It is always indicated when there is a flushed face, unnaturally bright eyes and contracted pupils, with increased heat of the head, and under such circumstances can be administered with the utmost confidence that gratifying results will follow its exhibition.

The dose of gelsemium is from the one-tenth of a drop to ten drops of the specific medicine. My usual prescription is: Sp. gelsemium ten to thirty drops, water four ounces; a teaspoonful every hour.

Rhus Toxicodendron is diuretic, diaphoretic, laxative and

stimulant to the nervous system. In large doses it is a powerful irritant. When externally applied it produces, in most persons, swelling and severe vesication. In the treatment of acute diseases, and especially those of children, rhus toxicodendron, in small doses, is a frequently needed remedy, and its curative action is unmistakable. It is a positive specific for that form of nervous excitement which so frequently causes little children to start up from sleep in a frightened manner. With rhus at hand, "night terrors" cease to be a source of alarm to fond mothers. Burning sensations, especially in the urinary and genital passages, are among the abnormal conditions which yield to the influence of this remedial agent, and its curative powers in frontal headaches, especially when most severe on the left side, is quickly manifested. Pains in the lumbar and sacral regions, extending down the thighs, sometimes with numbness, and accompanied by burning sensations in the parts involved, are also cured by this medicament.

The most effective dose of rhus toxicodendron is secured by adding from five to fifteen drops of the specific medicine to four ounces of water and administering one teaspoonful of the dilution every hour.

IS SPECIFIC MEDICATION THE SAME AS HOMŒOPATHY?

JOHN FEARN, M. D., OAKLAND, CAL.

Perhaps the cruelest thrust ever made at "specific medication" was made by those who have repeatedly affirmed that specific medication was purely and simply specifics for diseases. This statement has been denied again and again, and yet such is the mendacity of some who oppose this teaching that they still repeat this oft-repeated falsehood. That specific medication means specifics for disease, we here again declare, that it is not specifics for disease, but specifics for conditions of disease.

Another class who have never either studied specific medication or practised it, and therefore cannot come to any proper conclusion about it, declare that specific medication is only another name for Homœopathy; in fact, it is Homœopathy in disguise. This is wrong, but it is not so meanly and wickedly wrong as the first proposition before noted. I here and now affirm that there is very little in common, in my judgment, be-

tween specific medication and Homœopathy, except the success which has attended both practices. There are in my experience very few honest and intelligent men practising specific medication who are belittling the practice of Homœopathy.

The time was when narrow-minded physicians who had made no study of Homœopathy could dismiss the subject with a sneer and a shrug of the shoulders and some remark as destitute of wit as of truth. But sneers and shrugs and inuendoes will not down Homœopathy. The system has thriven on such treatment and grown to colossal proportions. The little pill doctor, as he has been called, has come to stay. If you think I am mistaken, call to mind the army of bright and brainy men who practice Homœopathy; look at her schools, at her hospitals, at the thousands upon thousands who employ Homœopathic physicians, surely these are not fools. Homœopathy, judged by its results, is a success, and yet it is very distinct from specific medication.

Some years ago, in delivering an address at Metropolitan Temple, San Francisco, at the graduating exercises of the California Medical College "Eclectic," I described the difference between prescribing homœopathically and according to specific medication, and I think I cannot do better than quote a few paragraphs from that address. I said:

"The Homœopath takes his seat by the sick person, carefully notes his condition, studies every symptom, uses all means to discover the exact pathological condition. Then he takes from his medicines that drug which, if given in large doses to a well man, would produce as near as possible an epitome in suffering of the patient before him.

"On the other hand, the physician practising specific medication examines just as carefully, thoroughly and skillfully the patient before him. Then he takes from his remedies that drug which experience has proven to him will relieve those ills and, in all curable cases, will cure the sick man and restore him to health."

Now, the question may be asked, is such prescribing from both these points a success? For my own part I answer, it undoubtedly is, as I have proved again and again. I may say that in that audience there were men who were professors in the Hahnemanian College, physicians who had practised Homœopathy for years. There was no objection from them to my statement of their case; but they approved it. I think the above clearly shows that specific medication is not the same as Homœopathy.

Again, if we take the indications for remedies of both parties, we shall find them diametrically opposite the one to the other. We will here take two well known remedies and the conditions they are given to meet.

Aconite is given by the Homœopaths in sthenic cases. Burt says it is specially adapted to the first state of all acute synochal and rheumatic inflammations, with full bounding pulse, great heat, restlessness, thirst and great nervous excitability, etc.

The specific medicationist gives it in asthenic cases, and the specific conditions calling for its use are rapid, small pulse, temperature above normal, with nervousness.

Belladonna: Take a few of the head symptoms for which belladonna is used. Again quoting from Burt: Violent congestion of blood to head; carotids throb violently; jugulars swollen; face bloated and red; eyes red, pupils contracted and great photophobia. Specific medication calls for, face pale, features expressionless, pupils dilated. In this case the Homœopath prescribes it for active congestion; the specific medicationist for passive congestion. We think this line of argument proves that there is a great difference between these two systems; that they are not the same. And we have reasoned thus not to prove that our friends the Homœopaths are wrong, and that we are right, but to show that there is a very distinctive difference between the two systems. I do not deny, but I affirm from experience, if you will give the very small doses Homœopathic physicians give, you may give these remedies in the cases above mentioned, as for instance, aconite in sthenic fevers, belladonna where you have active congestion, and you will succeed. But I believe if you will give specific medicines in the small but sensible doses used by specific medicationists, and for the conditions which they point out, you will succeed more rapidly than by any other system at present known to medical men, and in all curable cases your cures will be quickly, pleasantly and safely accomplished.

THE THERAPEUTICS OF CHILDHOOD.

J. D. McCANN M. D., MONTICELLO, IND.

I am not sure that in treating children we should not begin a long time before conception. It is certainly of prime importance that the father and mother of the child in question should be the counterpart of the first man and woman, barring their sin, that the Divine Architect fashioned and pronounced good. In all branches of animal life where the progeny is bred for the use of man, do we not seek by choice selection the very best paternal and maternal progenitors? Man ordinarily is an intelligent animal, the majority no doubt fitted for reproducing their kind, but there is certainly no question that a large number are unfitted to become parents.

The parentage, however, is secondary to the results produced, which results may go on reproducing their kind infinitely.

On a recent visit to the Home of Feeble Minded Youth near Fort Wayne, Ind., while attending our State Medical Association, the superintendent, who for nine years has had charge of that institution, made the statement that seventy per cent of the more than eight hundred inmates are there because of heredity.

In view of that appalling statement, would it not be well to devise some plan to controvert the perpetuity of such diseases? Until some other plan is devised, let us insist on our legislators making suitable provision in the way of homes that will care for feeble minded girls and women.

Again, we have intelligent men and women who in most things are bright enough, but when it comes to the practical part of rearing a family, their brilliancy, and ofttimes their breeding, is questionable. The diseases imparted to the offspring other than imbecility are numerous indeed.

A few years ago I treated a young lady for a serious disorder. After a few weeks' treatment she reported herself well, and moved to another county. Recently I was called to see a baby a few days old, and was surprised on my arrival at the home to find that the mother was the above mentioned young woman. The child was a typical syphilitic, wipe its lips with a soft cloth and they would bleed, the vaginal surroundings and vulva were distressingly afflicted, and bleeding on slightest touch; inflamed spots as large as a silver dollar were numerous over its

body. I told the parents there was no help for their child, and it died two or three days later. How much of the sin for the death of that child should be attributed to the doctor I am not here to say, but I have pondered over the question repeatedly. When treating the mother before marriage I should have so impressed upon her the necessity of prolonged treatment and the almost certainty of marking her offspring with a syphilitic taint that would carry it to an early grave, or, if it did live, to make it a burden bearer through life. Are we awake to our duties as medical men in prenatal therapeutics, as well as the therapeutics adapted to the child before us? To me it is a prodigous question.

The therapeutics of the first months of childhood, I take it, should be largely hygienic and sanitary. During labor a thorough cleansing of the vaginal outlet would be efficacious in preventing infection. I would not commend the method used by a doctor recently in rupturing the membrane by the use of an old brass safety pin that had been in use about the house, and I would condemn the dirty hands and foul finger nails we sometimes see. Cleanliness in the doctor, the mother, the bed, the baby and its belongings is one of the first therapeutic measures to be considered during and after delivery.

It is hardly necessary to enumerate the hygienic principles necessary to the intelligent physician. He will make his own deductions after a comparison with what he has seen and his ideal of what it should be. Closely allied with our hygiene is our dietetics, or the proper selection of food for the children. The adult, not conscious that he is the possessor of an organ called the stomach, cares not so much for the name of his food as he does for palatability and quantity, but with the child recently born into the world without prehensile ability, a proper food must be selected. The natural source, the mother's breast, may oftimes, by reason of death or other conditions, not be accessible.

Food has been defined as "any substance which can be utilized in the living organism for structural or functional purposes."

The above statement may be true, but the problem of adjusting the food to the requirements of the individual is most complex.

I asked a mother last summer what she fed her sick baby of seven months. She replied: "Why, it eat a good-sized piece of pumpkin pie this forenoon." When I remonstrated, she surprisedly exclaimed: "It craved it so much." In substance my

reply was that in the nursery beyond the grave, where your baby will be in a few hours, the mother superior has had sense enough to exclude pie from the dietary kitchen, and I might have added, where fool mothers do not give suck to an outraged offspring.

Our prenatal work being done, our hygiene carefully looked after, our baby diet sensibly adjusted, our Eclectic therapeutics may be applied.

We have a rich supply of remedies for children. Four important ones are aconite, asclepias, apis, and gelsemium. Possibly if these were all we had we would tide most of the little ones over, but we are glad to have a goodly number on which to draw, for the reason that the complications we meet in childhood, as well as in adult life, are many.

Echinacea is one of the remedies of more recent use that we are pleased to have at our command when throat, bowel or skin troubles are prominent.

In inflammatory conditions, when a nice, clean local application is needed, antiphlogistine is proving quite helpful, and especially so in pneumonia and inflammatory conditions inside the abdominal cavity. Passiflora and cannabis are two very helpful drugs in soothing the nervous and fretful child. The dose of cannabis, however, must be small, or the results will be more distressing than helpful. Chamomile is certainly the soothing friend of the crying and fretful baby, and cold pure water is a satisfying helper with whatever remedy you use as a therapeutic agent in the diseases of childhood.

THE SCOPE OF ECLECTIC THERAPEUTICS.

E. YOUNKIN, M. D., ST. LOUIS, MO.

The boundaries of Eclectic therapeutics are far reaching. There is no system of medicine extant that so fully or more completely recognizes the freedom of the human mind in its right to choose than that of Eclectic medicine. Man's liberties are based upon a sound judgment, braced by a liberal education, and backed by the experience of others in all ages. Elements of good constitute the background of the whole. In *vis medicatrix naturæ* there is a principal of action conceded to be correct; in specific medication is found the only basis of a rational therapeutics.

"Whatsoever things are true, whatsover things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue," adopt it; if not, discard it.

It is not the question as to where such a thing originated, who first put it into practice. Neither is Eclectic therapeutics confined to new discoveries nor to the discoverers only within its own communion. He who lives only by his own origination thrives best in his own imagination. It is not wise to plead the origination of principles. We must keep pace with all modern discoveries, eliminate the bad and adopt the good.

Eclectic therapeutics is chiefly selective, elective and specific. The various elements entering into this domain separates and segregates into five great divisions.

1st. Psychological therapeutics.
2nd. Drug therapeutics.
3rd. Mechanical therapeutics.
4th. Hygienic therapeutics.
5th. Dietetic therapeutics.

Man is made up of mind and matter. Whether mind is the basis of matter or matter is the basis of mind is of but little concern. We know that either one of these act upon the other, and when co-equal in action—when in harmony with each other—we have the physiological being.

There has been, perhaps, too much effort made to act upon the material part of man, and the psychical man too much neglected, when in fact the ratio of importance of the mental man to that of matter is much greater. This point too much neglected has given rise to "mental healers," faith doctors, Christian Scientists, etc. These are warps of the woof with efforts to lift up the fallen fabric; cranks because they swing to the other side of the pendulum, and have persuaded themselves into the idea that matter can be so tempered by their acts upon the mind that the whole can again be restored to its physiological state through their powers.

There is no doubt but what mind has much to do in the control of matter and over the proper maintainance of its equilibrium. There is no doubt but mind and matter as blended in the human organization are co-equal in function and phenomena. "Canst thou administer to a mind diseased?" is a problem that requires much of study. Eclectic therapeutics covers all this or

whatever lies therein as true, honest, just, pure, lovely or of good report. Drug therapeutics comprise a very large share of the Eclectic armamentarium. Too large, perhaps, for some are disposed to lift up rocks and mountains with drug action. Drug action should be regarded as but one out of a dozen or more forces. Perhaps three-fourths of the sicknesses are amenable to drug help, but there are perhaps no cases that can be cured by drugs alone. A delicate persons has eaten green apples and is taken with the colic. If you hypnotize the patient and persuade him that he has swallowed a lizard or a poisonous bug, he will eject the contents of the stomach, but what is the use of lying when with a dose of ipecac and lobelia you can lift out the green apples in a much easier way and shorter time? Suggestion not to repeat the act would here be the proper place.

Mechanical therapeutics has its place. There is much said about massage and manipulation. There is much good to be accomplished by this element of therapeutics. Possible neglect of this branch of the subject has given rise to the cranky theory that Osteopathy should have a place in medicine. Osteopathy is not all out of joint, not all bones and wind, but mechanical therapeutics forms perhaps one-tenth per cent of the whole of Eclectic therapeutics. He who supposes that Osteopathy is all false makes a mistake, and he who supposes that this is a complete system of rational therapeutics is equally in error. Suggestive therapeutics and mechanical therapeutics alone or combined is not, nor never can be, a sufficiency for the ailments of human kind.

The great purpose of Eclectic therapeutics, to my mind, is to adapt itself to all pathological states in mind and body. And the theoretical part must necessarily give way to the practical part where these meet in conflict.

Hygienic therapeutics has an important place in the art of curing. So also of the climatic environments.

Too little attention is paid also to dietetic means of cure—a source of many ills when excess and improper foods are taken, and the proper food to be given in individual cases is one of the most important studies within the duty of the physician.

In conclusion, I do not exactly agree with our very able writer, W. C. Cooper, M. D., who seems to thinks that food is food and medicine is medicine.

In my opinion, some drugs act by supplying the tissue demand, and hence become drug foods.

THE VALUE OF A RELIABLE PREPARATION.

WM. H. RUSSELL, L. L. B., M. D., IPSWICH, MASS.

It would hardly seem necessary to present a paper before this association on the subject which I have chosen, yet experience has taught me that many physicians do not realize the fact that disease cannot be combated with the name of the indicated remedy. It is wrong to carefully interpret the symptoms and then prescribe a preparation made from old, dried, inert stock. Many physicians cannot distinguish a good preparation from a poor one. It does not follow that because the container is ornamented with a gorgeous colored label that the contents are always as represented, i. e., cheaper, but just as good as Lloyd's, which goods are made for Eclectics by an Eclectic. It goes without saying that the man who is identified with the Eclectic school will understand what is required by the practitioners of that school, and will make preparations which will not disappoint the prescriber.

The physician's success depends: First, upon a correct interpretation of the symptoms. Second, upon the prescribing of reliable remedies in accordance with a correct understanding of the symptoms. Disappointment will follow, however careful may the diagnosis be made, if unreliable remedies be prescribed.

Every young physician, during his first years of practice, will find time to prepare remedies from the crude drug. He should become familiar with the physical properties of the crude drug; should smell, taste, and handle the same, and he will then be able to judge of the quality of remedies which some drug houses try to make him believe are just as good as the best, at about one-third price. I do not think one would begrudge paying a few cents extra when he is sure of a reliable preparation. Then, again, the drug faker will not be able to deceive one who has a practical knowledge of what a reliable preparation consists.

It is a serious matter to change one preparation of a medicine for another, or one man's make for another. The standard mother tincture of the new Homœopathic pharmacopœa is of ten per cent strength. Lloyd's preparations are of 100 per cent strength. Therefore changing from one preparation to the other should be done with care and consideration.

We have the medicine properly prepared, and of the required potency. Our next consideration must be, will the remedy cure

the condition which authority says it will? When a physician states that he cures all cases of a certain disease, when a large per cent are known to prove fatal in spite of any treatment, we realize that he is not a good diagnostician, or else he is a consummate liar. Students should be taught the possibilities of drug medication, and the impossibilities should be shown in their true light. Several centuries ago an old author wrote that a certain remedy would cure a certain disease. This remedy has been tried time and again and found wanting. Yet every new text-book for centuries perpetuates the lie. It has become classical, which means that the lie has been so often told that the text-book writers believe it. The old fellow who first wrote of the virtues of this drug was mistaken because his opportunities for observation were limited and his diagnosis was wrong. He had been treating an innocent malady, which he reported as malignant, therefore his treatment as reported was worthless. Yet text-books have been full of these classical lies, handed down from generation to generation.

There has been in the past too much catering to authority, too much what has been or what is to take place, and too little of the present. We don't care what an author thinks about treatment, we want what he knows about it. When we have a serious case to treat, we want facts. Eclectic authors are trying to bring order out of chaos.

SECTION OF THE PRACTICE OF MEDICINE.

SECTION OFFICERS:

CHAIRMAN, PITTS EDWIN HOWES, M. D.
VICE CHAIRMAN, B. L. SIMMONS, M. D.
SECRETARY, M. H. LOGAN, M. D.

THE TREATMENT OF DIPHTHERIA.

N. A. GRAVES, M. D., CHICAGO, ILL.

Every case of diphtheria requires very careful watching by the physician and nurse from the beginning of the disease until it has terminated and no sickness demands greater attention to detail. What should the physician do when called to a case of diphtheria? His first duty is the protection of others, and this can be done only by a rigid quarantine. Even though the physician may not be positive as to diagnosis, the case should be isolated. Select the largest, best ventilated room in the house, have all but the necessary furniture removed, keep the room at an even temperature and well ventilated, exclude every one but the nurse from the room, and the doctor has accomplished the first of his duties. Now, this is not always possible. We see cases often where no nurse can be employed, where the mother must be nurse, cook, and do all the general work for the household. What shall we do in these cases? I can only say, "Do the best you can." Have the other children taken away, if possible, or keep them away from the sick one at least. After the room has been arranged to the best advantage and the bed made clean and comfortable, instruct the nurse in regard to the discharges. Those from the nose and mouth should be taken on a cloth and at once burned. Do not allow the use of handkerchiefs, towels or other useful articles, but use old, clean cloths, and burn each time the child uses them. Have the body sponged with alcohol and water three or four times a day. See that the nurse keeps her

hands clean by frequent washing in some antiseptic solution. See that the urine is emptied at once and that the bowel movements are disinfected when they are passed. Have the patient fed with regularity such food as they will most readily take—milk, soups and broths being the best of foods in these cases. Fruit juices should be given freely when enjoyed by the patient. Insist as nearly as possible on perfect rest, even after the person has apparently recovered. If a child has been given toys or books to play with when convalescent, there is but one safe thing to do with them—destroy them. This constitutes our plain duty in the general treatment of any case of diphtheria.

Now, what is our duty as regards special treatment? In every case we consider the external and internal local treatment and the specifically indicated remedy. For external treatment, where there is moderate glandular enlargement, the use of hot oil and turpentine, equal parts, is excellent. A good deal of massage should be used and the neck rubbed for ten or fifteen minutes at a time every three or four hours. When there is great cellulitis, such as we see in some cases, I like the use of massage with oil and turpentine and the application of large cloths wrung out of hot vinegar and water, and applied as hot as the patient can comfortably stand. They should be changed often, and require the constant care of a nurse.

Internally, as a local application, sprays or swabs may be used. I use these now when the patient is not greatly inconvenienced by their use. If, however, the patient is a child, and struggles or resists attempts to use the spray or swab, it is best discontinued. In laryngeal cases the inhalations of the steam from vinegar or lime and the use of calomel by insufflation are valuable.

Internal medication is met by the indicated remedy. Phytolacca, aconite, rhus, belladonna, baptisia, gelsemium, nux, ipecac and strychnia are the most common remedies. At the Illinois state meeting, Dr. Perkins recommended the use of cyanide of mercury as a positive specific. Since 1896 I have been treating my cases with antitoxin, and I believe it to be a specific remedy. I shall not give you a list of statistics to prove what the majority of physicians now believe in regard to antitoxin, but will say that I have used it over 300 times, and that the deaths have been less than four per cent in all cases I have treated. Since January, 1902, I have had 34 cases and have lost but one. This patient was one of the most malignant cases I have ever seen. The

membrane covered the tonsils, uvula, pharynx and part of the roof of the mouth; the cellulitis was extreme on both sides. The diphtheritic membrane disappeared and his condition seemed fair until a post diphtheritic paralysis came on and he died. In this quite extensive experience I have never seen any unfavorable symptoms caused by antitoxin. I have had slight rashes appear and a slight paralysis exist in some cases, but this was transitory. I have children under observation now which I injected four, five and six years ago, who are as well in every way as any child ever cured of diphtheria. Unfortunate accidents have occurred from injections, at least we have such reports, but I have never seen a single bad result from antitoxin, and it would seem that disastrous effects have come from poor preparations or the careless injection of the remedy.

In conclusion let me urge the early use of antitoxin, and 2,000 units as the initial dose even in quite small children. If you are satisfied as to the disease, you cannot use it too quickly, and I have used it often enough to assure you gratifying results.

DISCUSSION.

Dr. Stephens, St. Louis: I would like to ask whether the doctor has the history of a case of diphtheria where there was a paralysis of involuntary muscular structure. I have never seen nor heard of it in diphtheria alone. In regard to antitoxin, when I get a rap on the head I want to see where it comes from, and the one case I ever used it in, it killed the patient, and I quit there and then. I believe I can show as clear a record in the treatment of diphtheria without antitoxin as any other man shows with it. The case I have just referred to was that of a boy about three and a half years old. We were getting on very nicely for a day or two, and the mother said to me, "What about the new remedy, antitoxin?" I said, "I am not opposed to anything that is reasonable, but I am not satisfied with antitoxin because I do not know where the injection of this remedy will end. I would rather not use it." The mother said, "If we don't use antitoxin, and this little boy dies, I will never forgive myself." I could not do much else but use antitoxin. I said, "If you and your husband will take the responsibility, I will inject the antitoxin." She said, "All right." I gave the little fellow, I think, 750 units. The day following there was no improvement. There was a slight weakening of the heart. As is customary, I gave the second dose and only gave 500. I saw improvement in a half hour, the

child was sitting up in bed, seemingly a little better. Ten minutes after I left the house the child fell over dead; the heart had stopped. I never saw a case of that kind from any other treatment, and I quit it then and there. I believe I can show a recovery of four per cent at least. I will have to have better evidence that it is the remedy before I will use it again. I would rather trust to a single remedy, and that is the bicromate of potash. I object to local treatment for this reason: I find if you will let the throat alone it will not swell very much. If you go to work with a swab you will have a difficulty that may end in death. I do not object to the atomizer, but to the swabbing I do object. It was tried on me and it nearly killed me. I had an experience in my own person. I threw it all away and I began to get better. I believe that a spray of alcohol is one of the best that you can use.

Dr. Robertson: I thought we had these people all convinced. He is from Missouri, and we must show him. I think we have enough people to show him that antitoxin is the thing. I am with Dr. Graves in all that he has said. It is nature's remedy. If you take a horse and inject him with the toxin of diphtheria, we will say with 10 parts, and if in one year or six months you can inject him with 3,000 times that much and get no bad results, when in the first instance the 10 parts almost killed him, you must admit that something has been manufactured in himself that has killed it. And when you take that same blood serum and inject it into the human, you get results, and get them quick, on good testimony. Why should we disbelieve? I have seen the beneficial results of antitoxin in 12 to 20 hours. I have seen in 20 to 30 hours complete desquamation of the membrane.

Dr. A. L. Clark: I feel that I am pretty nearly a child in this treatment by antitoxin. I have practised in a locality where we have had very little diphtheria. I have been called in consultation in two separate cases. I loaned my syringe for a third case. In this case the physician called on Sunday evening, and said he had a bad case of diphtheria. He said the child had been sick since Wednesday and he thought he would try antitoxin, but thought it late to get benefit. He gave the antitoxin, but came back and said the child had died of paralysis. In another case I was telegraphed to come and bring antitoxin, and was driven twelve miles into the country, and found a girl of twelve breathing her last from diphtheria. She only lived two hours after I got there. In another room were

two other children, one and a half and three years old. Patches of diphtheria covered the insides of the throats and tonsils, of a dull color. I injected antitoxin into their backs, to which they paid no attention. I thought they would be dead next day. Four others had been kept in the barn. The next day I went back, and these little fellows up and rolled over to have another injection, and I concluded they did not need it. The patches were loose and ready to drop out, and in 24 hours more these two were entirely well and all the patches had left their throats. I left my syringe and a supply of antitoxin to use in case of further trouble. Four or five days later one of the children at the barn came down, and I gave that one 1,000 units; gave the others 500 as an immunizing dose. None of them took it.

Some two or three months afterwards a big, strong German section boss from a town four miles from where I lived came in distress and said that two years before his child had died of diphtheria, and now his grandchild had just come from a neighboring town, and he had diphtheria. I went down and injected it into the child's back, and did not hear from it in a week. He came and said that the next day the boy was as good as well. He said another girl in the famly took the disease and the doctor injected antitoxin and she got well. Consequently, I must have faith in antitoxin.

Dr. Rollin: I don't declare for or against antitoxin, but what we see we know. I had some severe cases of diphtheria, and a physician called in consultation brought Parke Davis' little book along and read to the mother and me to show it was the one thing, and it had cured a great many, and we tried it, and six hours later they came for me on a run, that the child was dying. We worked with it quite a while, and it recovered. Following there was paralysis, but in two months it got well. He said if we did not use antitoxin he would have died anyway. For two and a half years this physician used antitoxin, and I have kept track of his cases with antitoxin and mine with the specific medication, and he loses a larger per cent of patients with antitoxin than I do with medical treatment, and these are facts. They are comparisons. The doctor says it is nature's remedy. I object. It is an artificial remedy.

Dr. Borland: Listening to this discussion and knowing what I know, I think it illustrates the old teaching of what you might call *"contrari contraris curantur."* I have passed through several epidemics of diphtheria, and if there is an epidemic I am

sure to get into it, although I try to get out. In the last epidemic which I passed through, fifteen or sixteen years ago, I treated 52 and lost 2; the Homœopaths treated 20 and lost 9; the Allopathic physicians in our locality lost 20 per cent. My first treatment was to apply nitrate of silver to the membrane to disorganize it and cut out the little devils behind it. When the nasal passages were much affected I used the bichloride, about 2,000, by injection. I use for a gargle, hydrastis, sanguinaria canadensis, chloride of potash and cloves. I used this for a great many years for all forms of sore throat. I defy any one to produce a better per cent than 96 per cent of cures. I do not say I could always do it in every epidemic. Two-thirds were malignant. They bled at the mouth and throat. If you apply the nitrate of silver and dissolve that membrane, you will not have the infiltration of the tissues, because by a dissolution of that membrane you get a discharge that keeps the tissues more free.

SCARLET FEVER.

ELOISE G. FOLTZ, M. D., PERRY, IOWA.

Scarlet fever is an acute, contagious disease. The contagion may be transmitted from the beginning of the fever through the entire period of disquamation or from a post scarlatinal nephritis or abscess or from a purulent discharge from any mucous surface.

The period of invasion is manifested by high temperature, severe headache, sore throat and vomiting. In from twelve to twenty-four hours the rash usually appears, which lasts from three to seven days, and is followed by the scaling, which may continue six weeks, the hands and feet being the last to become smooth.

The methods of infections, aside from direct contact, are through clothing, railroad coaches, books, toys, food (especially milk) flowers, and domestic animals.

The diagnostic symptoms are the rash and the obstinate sore throat. The rash is very fine and close, giving the skin that general red appearance produced by overdoses of belladonna. It is first seen on the neck and chest, and rapidly extends over the entire body. In mild cases it may not appear on the face and last only a few hours over the chest, thus often escaping the eye of the

attending physician. In these cases the throat trouble will be the only prominent symptom. This throat complication is rarely absent. There is a general redness of the whole mucous membrane, seldom any laryngeal affection unless complicated with diphtheria, but a marked enlargement of the tonsils and a tendency to swelling of the cervical glands and extension of the inflammation through the Eustachian tube to the middle ear.

One of the most common complications is nephritis, which may develop at any time from the inflammatory stage through the period of convalescence, which may be several months after all external symptoms have disappeared.

The diphtheritic bacillus may gain a foothold and add gravity to our case. Adenitis may also prove a severe complication, glands becoming suppurative and pyemia resulting. Otitis is present in a majority of cases.

Treatment: The patient should be isolated to a well ventilated room of even temperature. All unnecessary articles of furniture, carpets or ornaments not to be burned should be removed.

If the fever is high and rash not well developed, I order a hot sponge bath and a hot mustard foot bath, the patient remaining under the cover as much as possible. This process is repeated in the course of two hours if necessary. If the fever continues to run high, I bathe frequently. Internally I give the usual indicated sedatives and a mild laxative in broken doses if patient is vomiting, followed by a hot water flushing of the bowel.

Great care is paid to the action of the kidneys throughout the entire treatment. Patient is urged to drink plenty of water as soon as vomiting has subsided. If patient complains of backache, or if there is suppression of urine, a hot salt pack or a hot poultice is kept applied to the kidneys. During the fever stage, liquid diet only is permitted, the change to solid food being made cautiously if there has been any symptoms of nephritis.

Antiseptic alkaline gargles and mouth washes are used frequently. Glyco-Thymoline, listerine and glycerin, equal parts, diluted with hot water, is my favorite prescription. Tinct. of chloride of iron and glycerin are applied every two to four hours. Externally I apply a compound stillingia liniment frequently. If the pain and swelling is excessive, I apply flannel bags, four by six inches, filled with bran and heated by steaming. These are fastened by means of straps over the head and under the chin; over this a flannel cloth is tied to keep bed and clothing from

getting moist. One set is kept steaming while one is doing duty. As the pain subsides, a dry, hot flannel is substituted. If there is much pain in the ear, a few drops of mullein oil is put on a little cotton and inserted. I have tried ice bags instead of the heat, but have never had any success with them. The patient wants relief from pain, and the bran pack, properly applied, will give it, and as I have never had a case in which suppuration of any kind has followed, I believe that this treatment, used early, will subdue the inflammation and prevent suppuration and deafness which so often follow scarlet fever.

For disinfecting I have been using formalin. A little formalin lamp is used to generate the gas. This is used each morning over the entire house, being careful not to use it too strong in the sick room. All dishes and utesils from the sick room are first placed in a solution of formalin; all towels and bed linen are treated the same.

A five per cent carbolized oil is rubbed over the entire body every night and a warm soda bath given in the morning.

When the patient is ready to be dressed, flannel is worn next to the body. Care is urged against sudden chilling of the body. No swimming for boys for a good long time, and then the water is to be warm and they are not to remain in long.

The different symptoms are to be met as they appear. I use stimulants freely when needed. I avoid coal tar remedies or any heart depressants. I have tried in this paper to give a few suggestions in the treatment that might prevent some of the sequelæ which so often occur and prove a lifetime annoyance.

DISCUSSION.

Dr. Church: I think the main thing in scarlet fever, especially in the malignant form, is to combat the high temperature. In scarlet fever we have a temperature of 106 in the very beginning of the disease. I am not so sure that cold bathing is important in typhoid fever or in pneumonia, but I know to my own satisfaction that there are cases of malignant scarlet fever that can only be cured by the application of cold water. It is not often we have that form of the disease. If Dr. Foltz has the mild forms, she can treat them successfully by the line she has set forth, but if she should have a few cases of the very malignant form of scarlet fever, I would advise her to begin at once with cold water. I could report a large number of cases I have been called to, where they were given up, with tempera-

ture of 106 or 107, and I have called for a large piece of ice and put it in the washbowl, put towels in it, and applied it, and they will go to sleep in an hour, and I have never lost a case of scarlet fever since I began that, although I lost several before.

Dr. Sharp: I had an experience three weeks ago with three cases of malignant scarlet fever. All three died within four days of the time of getting sick, and the temperature was never above 101 degrees. I used this bathing, I used antitoxin and everything I could get hold of. Nothing did any good.

Dr. Standlee: I wish to speak of two remedies, one for and one against. I think belladonna is the principal remedy that we shall find valuable in the formative stage of scarlet fever. Frequently symptoms seem to indicate gelsemium. My experience is that it will produce suppression of the urine, and in most cases they will die of this condition. That is one of the cases where the indications for gelsemium does not seem to work well. My experience in malignant scarlet fever has been that expressed by the preceding gentleman. The most die in three or four days. Frequently the temperature was normal or subnormal. There seems to be great depression about the base of the brain. I have not made up my mind just what the pathological condition is in a case of malignant scarlet fever.

One point in regard to the care of scarlet fever: In our city they placard the house, and it has recently occurred that the health commissioner will not remove these cards in thirty days on account of the contagion, in order to save the trouble of fumigating the house two or three times. A child with scarlet fever will get up in three or four days, and they cannot limit them. They will carry the contagion about, and every child in the neighborhood will get scarlet fever. I think the physician should be very careful indeed. Anoint the body all over with an antiseptic oil and use the bath frequently, and this will obviate some of the danger which our boards of health permit, from a desire to save expense.

Dr. Church: I would like to say that these cases are not always scarlet fever. They may be cases of acute poisoning. I have had similar cases. They did not prove contagious or spread in the neighborhood. I knew of an instance where in a well there were found a number of dead angle worms, and the children of the family who partook of that water had what was said to be scarlet fever. All died; all had the eruption of the most intense scarlet fever, and all characterized by the low tem-

perature, and the poison was so violent that they were overwhelmed. There was never a high temperature. Scarlet fever cases have a typical course and the high temperature is the main thing.

Dr. Standlee: These cases of mine originated from an epidemic of scarlatina and were contracted at school. There was desquamation.

Dr. Stouffer, Pennsylvania: I had a case in Fayette County where a family lived on the top of the mountain and claimed they had the best water that could be had in the country. It was cold and nice. I was called in the night. They said the child was rolling all over the bed, with high fever, and I said "I am afraid that boy will die," but the little girl was still living. I happened to cast my eye up along behind the orchard and saw the house was in line with a spring, and I said, "That is the cause of your losing your child, and you will have to quit using that water." I believe the disease was brought about by human filth. I believe we should sponge them and continue the sponging to reduce the temperature and assist elimination until the disease has abated.

COMPLICATIONS OF TYPHOID FEVER.

W. N. MUNDY, M. D., FOREST, OHIO.

Personally we know of no disease which presents such a multitude and variety of symptoms as does typhoid or enteric fever. The subject of typhoid fever is rather a hackneyed and well worn theme, but it is our purpose to deal only with its complications and sequelæ, such as we have met personally, and as we mention them, to refer briefly to the literature pertaining to it.

Dr. Hare, in *The American Medical Quarterly* for June, 1899, describes three classes of typhoid differing from the ordinary; naming them respectively, the cerebral, pulmonary, and renal types, as these symptoms respectively predominate. Whilst delirium and typhomania are frequently observed in typhoid of moderate severity, nervous symptoms such as enumerated by Hare in his article mentioned and in the following case are certainly somewhat out of the ordinary.

Chas. G., aged 20, had been feeling badly for several days with the ordinary symptoms of typhoid such as malaise, anorexia,

epistaxis, etc. October 10, 1899, on my first visit, his temperature was 104 1-2 degrees F., pulse 108, tongue covered with a brownish coat, no diarrhœa, face flushed and patient delirious. On the third day, his temperature still running at 104 degrees, the patient became violently delirious, and required the combined efforts of his attendants to keep him in bed. During the entire course of the fever, which pursued rather a prolonged course, this violent delirium frequently returned and proved a troublesome complication.

The pulmonary type of the fever is aptly illustrated by the following case: In September, 1898, I was called to see a schoolboy, aged 13, that had been feeling tired and aching, no disposition to move about, headache and anorexia. Temperature 104 degrees, pulse 108. The next day he had two thin diarrhœal passages and developed some cough. His temperature was 104 1-2 degrees, pulse 108. On the occasion of my third visit crepitant rales were distinguished in the axillary region of the right lung, dullness on percussion being quite marked. Temperature 105 degrees F, pulse 108. The diarrhœa and cough persisted. The number of passages varied from two to seven in the twenty-four hours. On the tenth day crepitant rales were audible in the left lung. The nervous system suffered considerably, the delirium not being of that low muttering type usually present in typhoid, but rather more of the type described in the first case, the patient being wild and excitable, necessitating constant watching in order to keep him in bed.

The early appearance of the pneumonia would indicate that the infection was coincident with that of the typhoid, or, in other words, it was a double infection. Some writers, as for instance, Thompson, states that there is no such thing as a hybrid form of pneumonia and typhoid. It strikes us that in this case there could be nothing else than a double infection, or hybrid form of the two diseases.

Pneumonia in the second or third week, or even later in typhoid, is quite common. The first case referred to in this paper developed it in the third week of the disease. In such a case it is usually due to an auto-infection. Pleurisy may prove to be a distressing complication, and although we can find no mention of it being so, it occurred in one of my own cases and was a cause of some alarm as well as of considerable worry. It was of the plastic form, and its advent was announced by a rise in

the temperature of two degrees. It occurred during the third week.

Anders and Osler mention arthritis as a complication. They agree that it is usually monoarticular, but may be multiple. In the case last mentioned, on the twenty-fourth day the right elbow was seen to be considerably swollen and was very painful. The temperature at the same time jumped from 99 1-2 to 102 degrees F., reaching normal the second day. These authors claim the arthritis often passes on to suppuration. Such has not been my experience. In the case just mentioned the swelling and pain soon subsided.

Pseudo-membranous inflammation of the nares and pharynx developed in a girl aged 13, developing on the tenth day of the disease. This inflammation caused no elevation of the temperature nor increased rapidity of the pulse. The only noticeable feature was a marked change in the color of the patient, the face becoming exceedingly pale and sallow. The inflammation lasted about four days. The two authors mentioned state that such an inflammation may not only occur in the nose and pharynx, but in the larynx and on the genitals as well.

In *The American Journal of Medical Sciences*, July, 1899, DaCosta calls attention to the occurrence of phlegmasia dolens as a complication of typhoid fever. He avers it is not a common occurrence, quoting writers to prove that it doesn't occur in more than one or two per cent of the cases, although in a series of 215 cases in soldiers it occurred in nearly 14 per cent. It is a phlebitis, the result probably of a thrombosis. Osler, Anders and Thompson each attribute it to such. I have met it three times. In the first of my cases, which will suffice for illustration, the pain and swelling began on the twenty-third day of the fever. The complication was announced by a sharp rise of the temperature and pulse, the temperature reaching 103 degrees F., the pulse 96, each dropping two days after to normal. Dry heat and pressure by means of the bandage were used, the latter being persisted in for some weeks.

Parotitis is not, fortunately, a common complication. It is usually unilateral, and is regarded as a very fatal complication. Its tendency is said to be toward suppuration. It arises from an inflammation extending along Steno's duct or from a metastatic inflammation. We have met it but once in a rapidly fatal case as follows: Was called on the 21st of October, 1886. The young woman presented the usual symptoms of typhoid.

The temperature was 101 degrees F. On the 23d it was 105 degrees F., pulse 114. She complained of pains all over the body, especially the right knee, which, however, did not swell nor show any of the symptoms of arthritis. The second day thereafter, the 25th, the temperature was 104 and the right parotid gland was swollen and tender. The tenderness and swelling increased until the 27th, when the left gland was seen to be slightly swollen, the right being very large. On the 28th the face and neck were enormously swollen and red, presenting somewhat the appearance of an erysipelas. The patient was in a coma, and died in that condition on the same day.

Hemorrhage is probably the most frequent complication. It may occur at any stage of the disease, and is produced by the ulceration of Peyer's glands and the separation of the necrotic sloughs. We have met it early in the disease and as late as the twenty-first day, when we were congratulating ourselves that the patient was nearly if not quite convalescent. It usually announces itself by a sudden fall in the temperature and with some symptoms of collapse.

Perforation has never occurred in my own personal practice. It certainly is a rare condition in private practice. We are cognizant of one case occurring during convalescence, and possibly caused by taking a dose of sulphate of magnesia to relieve a supposed constipation. The patient died in less than twenty-four hours after taking the medicine.

Epistaxis, though common, often proves to be rather troublesome. In one case it was so severe that plugging the nostrils was necessary.

Probably the strangest complication we have ever met was a complete aphasia. It was in a case running a perfectly normal, in fact, rather a mild course. The aphasia came on during the second week, and the boy, about fourteen years old, was unable to speak a word. There was at no time any delirium nor stupor. Speech returned some weeks after recovery from the fever. Osler and Anders both mention it as a sequel occurring in young children.

Many are the neuroses complicating this affection. We have called attention to aphasia; Osler and others call attention to a neurosis of the spinal column, which they call the "typhoid spine." Every one of us can recall cases characterized by sharp, lancinating, radiating pains in the back and hips and aggravated by motion. The probabilities are that it is a neurosis, but some

authors claim it is an inflammation of one or more of the vertebræ.

The skin in typhoid fever may be the seat of various eruptions. The classical eruption of typhoid fever is the rose-colored eruption usually seen upon the abdomen about the tenth day. Personally sudamina has been more frequently seen. This is claimed to be due in part to the sweating. We believe it to be due to the heat and anointing the abdomen with lard and turpentine.

In one case an erythematous rash resembling scarlatina occurred. The rash extended over the entire body. It was in a young girl of a very nervous temperament, and occurred in the second week of the disease. DaCosta in *The American Journal of Medical Sciences*, July, 1899, calls attention to the occurrence of rashes resembling both scarlatina and measles. The title of the paper is "Anomalous Rashes in Typhoid Fever." Furunculosis occurred in a boy aged seven during the early part of the third week or on the fifteenth day. They produced no untoward symptoms. Among other rare complications noted are jaundice, liver complications and noma. In *The American Journal of Medical Sciences* for July, 1898, DaCosta refers also to hepatic complications without jaundice. Personally we have never met any of the latter complications. We have noticed several journal articles lately referring to the latter condition as a complication, and have often wondered as to what the cause may be. Does the mode of treatment have anything to do with it? Pyelitis and cystitis are rarely met with. The latter condition we have met with once, occurring in the third week.

Our object in thus enumerating some of the many complications we have met in this disease is principally for the purpose of emphasizing the folly of attempting to outline a plan of treatment or of treating a disease presenting such a variety of symptoms and complications.

It is well to say sulpho-carbolate of zinc, echafolta, salol, phenacetin, and many of the so-called intestinal antiseptics are good in typhoid fever, but the question which most interests us is, when are they good? What are the conditions which call for them in this or, in fact, in any disease? It is only when we ascertain this in reference to any drug or medicine that therapeutics can lay any claim to being a science. There is entirely too much cut and fit in our therapeutics of to-day. Too often we are mere machines for the manufacturing pharmacist and, I

am sorry to say, for the patent-medicine man also. I have seen prescriptions calling for medicines which are on the market as patents and advertised daily in the secular papers. Such is much of the therapeutics of to-day.

NARCOMANIA.

GEORGE T. FULLER, M. D., MAYFIELD, KY.

It is not the purpose of this paper to discuss the pathology of the drug habit in its various forms nor to discuss the various treatments, but to give you the results of my twenty years' experience in treating the habit in its various forms. There are four drugs which, if pushed until they produce their physiological effects, can be used as the base of a successful treatment for the drug habit, viz., sulphate of atropine, duboisine, cannabin, and hydrobromate of hyoscine. I have used them all, and am decidedly prejudiced toward the last named drug, hyoscine hydrobromate, as less dangerous and in every way better.

This drug, with the proper auxiliaries, to be mentioned later, will cure any case of drug habit—chloral, cocaine, opium or morphine.

Habitues are in one of two classes, Irritable or Atonic. Some are extremely irritable, others less so, and so on as you approach the median line dividing the two classes. Others are extremely sluggish or atonic, others less so, in the same class as they approach the median line. You will find every case in one or the other class, and it is very important to recognize this fact, as it is a key to their successful management.

Your patient should have the following preparatory treatment: Purge the bowels freely with anything you may like, so you make it thorough, for the more thoroughly this is done the less trouble you will have with the stomach during your after treatment. Epsom salts is as good as anything else. Give two heaping tablespoonfuls every three hours until you have washed him out thoroughly. Up to this time you let him have his drug at the regular time and in the usual quantity, but after you get the bowels thoroughly washed out, wait then until he begins to feel the need of another dose of the drug, and give him 1-200 of a grain of hyocine hydrobromate hypodermically, and repeat

every half hour until you get him thoroughly under the influence of it, which will be manifested by restlessness, dilated pupils, flushed face, dry mouth and throat, hallucinations. The patient will talk at random, and be almost continually grasping at imaginary objects in the air, hunting for or picking up imaginary bugs, etc.

After you get him in this condition you should repeat the injection of hyocine just often enough to keep him in the above described condition for from twenty-four to sixty hours, when he will quiet down and take a little nap or sleep. When he does this, stop the treatment, and let him come from under the influence of the drug, when all desire for the drug will have been destroyed.

The hyoscine is only the base of a good treatment. If your case is of the atonic class, you may associate either atropine sulphate, sparteine or strychnine, owing to indications. On the other hand, if your case is irritable, you may associate gelsemine 1-50 grain, or conine, as may be needed to quiet the nervous excitability. Toward the last of the antidotal treatment your patient may become weak, extremely so. However, that is the exception. If so, you will need nitroglycerine, digitaline, and possibly sulphate of atropine as a stimulant to the cardiac and respiratory centers, hypodermically administered. In a few hours he will have reacted, and will want nourishment. Give him hot milk with toast, animal broths, soft boiled eggs, or like diet for twenty-four hours, when you can let him resume his usual diet.

To combat the hyperesthesia that obtains in almost all cases for a few days after coming from under the antidotal treatment, there is nothing perhaps better than passiflora in full doses. Scutellaria is also a good remedy, as is also faradism in mild current, applied up and down the spine. A tepid bath two or three times during the twenty-four hours will add greatly to your patient's comfort. Strychnia in some form, say nitrate 1-60 grain every four hours, or brucine, if the strychnia is not well borne, continued for two weeks, will complete the cure and leave your patient without any cravings or desire for the drug, and in addition his health will be in every way materially improved.

SPECIFIC MEDICATION IN INFECTIOUS FEVERS.

HERBERT T. WEBSTER, M. D., San Francisco.

Have we specific remedies for infectious fevers? "Not at all," the average specific medicationist will reply, "but we have specific remedies for specific conditions, and the rule applies to infectious fevers as well as to other diseases."

This is a proposition which was in vogue in the time of Paracelsus, one which Hahnemann honored in his earlier teachings, one observed by Rau nearly eighty years ago. and one taught by Professor Scudder and honored by his disciples in later time. It is true to-day as ever, though it is a fact that no immutable laws govern the specific indications already laid down, and that the treatment of infectious fevers may yet be susceptible of improvement on such lines.

A comprehensive study of the infectious fevers will convince us that their treatment cannot be confined to a simple and limited routine method, for every case encountered will be likely to present some individual phase which will demand specific therapeutic adaptation; not that every case will demand a new remedy, but a different combination of means may, nevertheless, possibly be essential to success in nearly all.

Nosologically we have little regard for therapeutic adaptation in infectious fevers. A severe case of varicella might demand a list of remedies which would suffice in a case of variola. The vulnerability of the system—its condition of receptivity to disease—has much to do with the necessities of a case of infectious fever, as well as in other instances. Alcoholic subjects will often die in a few days with a fever which would not severely affect an ordinary person. Diphtheria may appear in malignant form in a family, and carry off one individual of peculiar susceptibility or receptivity in a few hours, while another member may only be discommoded by a slight sore throat. Such facts are to be taken into consideration.

The pathological outcome of infectious fevers, especially those not due to malaria, consists largely in changes in the cellular basis of the tissues. These changes vary from a slight cloudy or parenchymatous degeneration to complete necrosis and death of parts most severely implicated. Sloughing, however, may de-

pend, in some cases, more upon hemorrhagic infarction due to mycotic emboli than upon the specific effect of ptomaines. Still, there is a specific tendency in certain affections of the kind toward destructive action upon certain selective parts or organs, such as the throat in diphtheria, throat and skin in scarlatina, skin, throat and lungs in variola, skin and mucous membranes in rubeola, liver in yellow fever, intestines in typhoid fever, etc.

To prevent, therefore, destructive action of toxines upon the cellular basis of tissues is the prime object of treatment in the management of infectious fevers. True, we have the danger of paralysis to conquer in diphtheria, but even here we are to meet a neuritis arising from the disturbing influence of toxines upon neurons or nerve cells.

Thus it appears that the first object in the treatment of infectious fevers not malaria is to conserve the vitality of the basic structures of the body until the storm is over—until the fermentative action in the blood is spent and the ptomaines are neutralized. By so doing we shorten the duration of the disease, and enable the subject to enter upon recovery with tissues not extremely dilapidated.

Can we accomplish this with cathartics? Hardly. The day when cathartics can be expected to accomplish anything in this direction has passed away. Can we expect to effect it with diaphoretics? Possibly, to some extent, but not fully. No one will maintain that diaphoretics specifically neutralize ptomaines and sustain the vitality of the tissues. The old idea of elimination does not belong to the creed of specific medication.

Such favorite resorts of the "Fathers" are best used but sparingly in infectious fevers, if at all. Measures which look to a gentle encouragement of normal-processes and the neutralizing of toxins will afford better results.

We will not expect to arrest infectious fevers by killing the germs which give rise to them, or which exist during their course. Measures which would be capable of accomplishing this would be liable to kill the patient before it destroyed the germs. We let the bacteria alone and conserve the vital forecs by those means which specifically neutralize the poisons, and at the same time encourage normal life of the bodily tissues.

Life cannot exist without waste. Whether bacteria cause the exanthemata or not, their presence in the blood is a menace to the life of the subject because of the fact that during their cycles of existence the secretions which they form in the blood

undergo fermentation, and thus poison the entire economy. The vaso-motor centers are thus excited, and later paralyzed, perhaps; all the secretions are disturbed or vitiated, and the vital centers are embarrassed, if, indeed, the tissues specifically affected in particular forms are not so destructively influenced as to result in fatal sloughing.

The leading specifics, then, for infectious fevers are antiseptic sedatives. Certain specific indications enable us to select them with tolerable assurance, though fine discrimination may often be impossible.

What are the antiseptic sedatives? They are agents which sedate febrile excitement by neutralizing the ptomaines which give rise to it. They are especially adapted, therefore, to the infectious fevers. A few of them will here be named. Doubtless many exist which cannot now be mentioned for the reason that they have not yet been discovered. We are yet on the threshold of medical knowledge, after centuries of investigation.

The antiseptic sedatives now best known are baptisia, echinacea, lachesis, and salicylate of ammonium. We can best arrive at a notion of their action and importance in infectious fevers by a separate analysis of their individual qualities.

Baptisia has been before the profession for more than a hundred years as a corrector of septic conditions of the blood and as a remedy for fevers of adynamic character and putrid type. Its reputation as a febrifuge stands very high in certain quarters, but it commands little favor in that respect except in infectious fevers. It undoubtedly acts as a febrifuge by controlling the influence of toxic action in the circulation. Dr. Cutler, who introduced the remedy during the last years of the eighteenth century, as *Indica fera*, outlined these properties in his article, and Thacher, in his American New Dispensatory, published in 1810, affords us a tolerably clear exposition of its properties, though a more refined knowledge has possibly grown up in recent years as to its proper application. In infectious fevers, especially of adynamic type, it is specific to correct septic tendencies and fortify tissues against the destructive action of the toxines generated. The specific indications are, infectious fever of adynamic type, with or without a depraved state of the mucous membranes; depravity indicated by prune-juice discharges, and tenacity to ulceration of phagedenic type. Its best effects as a febrifuge will be observed in the early stage of infectious febrile action. The dose may vary within quite a wide range—from the

fraction of a drop to ten drops of a reliable fluid preparation. Like other antiseptic sedatives, baptisia exerts its influence on the circulatory or vaso-motor centers indirectly, by correcting vitiated states of the blood, while another class of sedatives—the "special sedatives" of Professor Scudder—probably act directly or specifically on the vaso-motor centers.

Echinacea belongs in the same class with baptisia, and yet it differs in important respects. Its influence on the glandular structures of the intestines is not as marked as that of baptisia, while it more specifically influences the mucus membrane. In enteric fever, then, a combination of the two is preferable to the use of either single agent, as it covers more of the affected territory than either agent singly. Echinacea possesses the property, in a high degree, of neutralizing ptomaines in the blood, and in all other septic conditions as well as in infectious fevers it is a remedy *par excellence*. From microscopical observation of the blood during its action it has been demonstrated that this drug possesses the power of lessening the number of bacteria in the circulation during infectious diseases. Whether this be true or not, clinical experience has demonstrated to more than one of my readers that its power over toxic conditions arising during infectious fevers is remarkable. It exerts a more specific influence upon the cerebro-spinal membranes than baptisia, and in affections tending to involvement of those parts is to be preferred. In affections involving the cutaneous surface, such as erysipelas and the exanthemata, echinacea exerts a more selective influence than baptisia, and therefore should have the preference. As a general vital stimulant, also, echinacea is to be preferred to baptisia, for though baptisia is adapted to adynamic conditions, it does not so surely invigorate nervous energy as the drug under consideration.

The specific indications for echinacea are much similar to those of baptisia—adynamia, dry tongue, typhoid tendency with prostration and delirium, evidence of breakdown of tissue, such as dark or prune-juice discharges from mucous membranes, and fetor of excretions and exhalations, with feeble pulse. With such indications, diffusive inflammatory conditions of the skin and evidence of cerbro-spinal meningeal inflammation would be additional indications.

It is unnecessary to specify the name of the disease to which such remarks are applicable. All affections connected with the presence in the system of vegetable germs of disease (bacterial)

frequently demand these remedies, while there are those who claim marked antimalarial qualities for echinacea.

Lachesis is a remedy which deserved more attention than is ordinarily given to it by our branch of the profession. It is not to be turned down, however, because introduced by the Homœopaths, for we can ill afford to turn down others which we now employ which were derived from the same source, and it is a poor rule which works in one instance and will not apply in another. The searchlight of history, thrown upon the subject, will convince us that "there is nothing new under the sun," and with considerable truth, though there doubtless occasionally arises a new thought. Many times, however, we find, after we have proudly brought our creations to light, that some other fellow was there long before us.

Lachesis applies most specifically to cases of infectious fever in which involvement of the peripheral nerves is prominently manifested. In diphtheria with threatened paralysis of the larynx or heart, in typhoid fever with multiple neuritis; indeed, with such complications in any form of infectious fever, lachesis is the most applicable antiseptic we possess; though we must not forget that it possesses rare virtues as an antiseptic sedative outside this specific quality. It not only arrests the paralytic symptoms in diphtheria to great extent, but also tends to arrest sloughing, by acting as a vital stimulant to disorganizing tissues, and controlling or neutralizing toxic elements in the circulation. The selective influence of this agent upon the pneumogastric centers will aid in its selection. In any case attended by feeble cardiac action, or embarrassment of the respiratory function without actual obstruction, where an antiseptic agent is required, this may well occupy first attention. The lowest attenuation obtainable at a Homœopathic pharmacy may be employed in two or three-grain doses of the trituration. The tenth will often be the lowest to be found, but it is amply potent for the object sought.

Salicylate of ammonia is the specific antiseptic sedative where hyperpyrexia attends septic conditions. Given in all the indications for any other sedative, and if there be a temperature persistently above 106 degrees F., this is the one to be depended upon. I well recollect a case occurring during an extensive epidemic of typhoid fever which visited our section a few years ago, in which the temperature remained stubbornly at 107 degrees F. in the hands of a neighboring practitioner for weeks, and until the attendant became discouraged and pronounced an unfavorable

prognosis, rapidly benefited by this agent. Within forty-eight hours the evening temperature was at 105 degrees, with marked morning decline, and within five days afterward the normal line was reached, for the case was already of four weeks' duration. One swallow does not make a summer, but it may be significant, after all. Many other instances might be cited which have occurred in my own and in the practice of those with whom I have consulted, where fully as striking results have been achieved.

Doubtless many times two or more of the antiseptic sedatives may be advantageously combined. While not an advocate of poly-pharmacy as a rule, combinations sometimes cover a given field better than single agents, in my opinion.

It would seem, then, that in infectious fevers our mainstay is the class of remedies I have designated as "antiseptic sedatives." They sedate febrile excitement by relieving the vasomotor centers of irritation arising from infectious toxines in the blood, and thus control febrile excitement, while they remove tissue irritants and depressants from the circulation. The sedatives which specifically influence the vasomoter centers, and which were termed "special sedatives" by Professor Scudder, possess but limited power in such cases, for the reason that they do not remove the existing and perpetuating cause of the febrile disturbance, the toxines. In mild cases they undoubtedly exert some influence, but where the infection is severe we must rely upon something more potent.

In malarial fevers the infection does not usually amount to such marked toxic influence as in those of bacterial origin. Here ptomains do not present such pronounced disturbing influence as the debris of broken-down blood corpuscles. Such material, drifting into the liver and spleen, and into other important organs, proves the most disturbing element. To clear up the portal circulation with proper agents seems, in that class of infectious diseases, the most important item. To accomplish this we have resort to chionanthus, chelidonium, boldo, polymnia, grindelia squarrosa, carduus marianus, and ceanothus.

Another class of remedies often specifically indicated in the treatment of infectious fevers is that comprising the chemical correctives. These were first adapted to the treatment of influenza by Dr. Ridge, of London, in 1838. He determined, through observation and experimentation, that a particular condition of the system indicated by a white tongue demanded alkalies, and

that one indicated by a red tongue demanded acids. In our school considerable prominence has been given this kind of practice within the past thirty years, and the specific indications for acids and alkalies have been rather closely defined. After these indications we often find the salts of sodium, and hydrochloric and sulphurous acid applicable in infectious fevers. The subject is so well understood by my readers, however, that specification is unnecessary.

The details of the specific treatment of infectious fevers as a whole will occupy much more space than the limited room allowed me in these pages would sanction. Therefore I have confined myself largely to the ratiocination rather than to the details of the subject. Specific medication depends upon the application of general principles, as we shall see upon close analysis of its influences. The more we investigate the subject, the more we will become convinced that its practice is something more than the application of a potpourri of odds and ends to the treatment of disease. It ought to be reduced to a scientific arrangement of systematized facts, and the time will finally come when this will have been accomplished.

TREATMENT OF PNEUMONIA.

R. L. THOMAS, M. D., CINCINNATI, OHIO.

That pneumonia is one of the most widespread and also one of the most fatal diseases incident to our country, few will deny. It finds its victims from the lakes to the gulf and from ocean to ocean. No class is exempt. The millionaire and the begger, the statesman and the most illiterate tramp, share alike in its ravages. Truly pneumonia is no respector of persons. It walks the highways of life too often a conqueror.

For centuries the medical profession has been looking for a David to slay this Goliath, but with the dawn of a new century the death rate shows a slight increase rather than a decrease. From the depleting treatment practiced on "the Father of our Country" to the ice cradle and serum treatment of to-day, there has been many plans devised, yet, to quote from Osler's late edition, "It is the most widespread and fatal of all acute diseases, for in the United States, during the census year 1890, there died

of it 76,496, a death rate per 100,000 of population of 186.94. In Chicago during the past ten years it has gradually replaced consumption as the principal cause of death. In the last decade the death rate was 18.03 per 10,000 of population, against 12.36 per 10,000 in the previous decade, while in Massachusetts there has been a progressive increase in the death rate. Hospital statistics show the mortality ranges from 20 to 40 per cent. To one who has practiced the Eclectic system of medication, this high death rate seems almost criminal, for if there is one disease more than another that has been shorn of its terrors by the kindly treatment of our school, it is pneumonia.

I do not expect to bring before you to-day a new treatment, but to remind you that our fathers were successful in tiding their pneumonia patients safely to recovery and their children have continued in their footsteps. I will not undertake to name every remedy that may be used, but will point out a half dozen or more that stand out prominently, like a magnificent beacon in a lighthouse, to guide the physician into a safe harbor.

It is hardly necessary to say to this body of medical men that the patient should be placed, when possible, in a large, airy well ventilated room where the sunshine has free access; that the same careful hygiene of the sick room should be carried out as we would in any infectious disease. Of course the room will be kept sweet and clean and not too hot, about 68 or 70; nor that the diet should be liquid and nourishing, nor that the patient should be allowed to drink freely of pure table water. It is the medication of which I wish to speak.

Veratrum: In the adult, the inflammation being sthenic in character, we usually find the pulse full, strong and bounding, showing excess of heart power. Here veratrum stands unexcelled. To obtain the best effects I use from thirty to sixty drops of veratrum in half a glass of water, with just enough morphia, about one-half grain, to counteract its nauseating effect. Of this I give a teaspoonful every two or three hours. As the system comes under the influence of the remedy we may lessen the dose or lengthen the interval. If the pulse be vibratile, the cough hard, and a sharp cutting pain in lung or pleura, bryonia will be either combined with the sedative or alternated with it. Of this agent ten drops to four ounces of water will be sufficient. In these two remedies we have a mighty host. One old practitioner told me some time ago that he was almost ashamed to tell

it, but he did not remember of ever losing a case of pneumonia, and that these two remedies were his chief agents.

If the patient be a child or an elderly person, aconite will replace the veratrum. Of course asclepias will be used where the skin is dry, and there are pleuritic pains with a dry cough It will also be found useful when there is marked effusion. Thirty drops in half a glass of water, a teaspoonful every hour. Ipecac in the early stage, where there is marked irritation, and especially in children, will not disappoint you. Lobelia, where there is an oppressed pulse, more or less dyspnœa, and in children where the tubes are choked with mucous, is a grand agent. In these half dozen remedies we have a working force that will cause the disease to recognize a master. When the evidence of sepsis appears, then we will have recourse to echafolta, baptisia, the mineral acids, the sulphides and chlorates, as the case may need.

As to local applications, every physician has his favorite. Some of the older physicians present who have fought a desperate case through successfully, and used the old mush jacket or hot poultice, will tell you there is nothing that can equal them, though others are equally positive that they only add to the burden the patient has to carry.

Flannels wrung out of hot water and applied every few minutes have their advocates, while the old larded cloth and emetic powder have hundreds, yea thousands, of ardent supporters. One of the latest claimants for recognition as a local remedy is antiphlogistine. This is to be spread upon a cloth and applied hot. But whatever local application may be used, the judicious use of the above mentioned remedies will succeed in reducing the mortality from 20 to 40 per cent to from 1 to 5 per cent.

TUBERCULAR PERITONITIS.

E. J. FARNUM, M. D., CHICAGO, ILL.

Statistics which I have gathered from the literature upon this subject show that tuberculosis of the peritoneum is in the majority of cases secondary to pulmonary tuberculosis, or to tubercular foci which are located elsewhere in the body. However, Schramm, in 3,356 post mortem examinations, found 33 cases of idiopathic tubercular peritonitis—seven per cent.

Wolff, in the post mortem examination of 17 cases that died of some form of tuberculosis, found the peritoneum tubercular in six—35 per cent. Osler and Frankfurt, within the last five years collected records of 912 tuberculosis patients. Of those, according to the clinical diagnosis, 44 were affected with tubercular peritonitis—four and eight-tenths per cent.

It is therefore evident that the most frequent sources of peritoneal tuberculosis are primary affections of the lungs and pleural sac. The lymphatics of the parietal pleura communicate with the mediastinal glands which are in close circulatory relation to the retroperitoneal glands. The tubercular processes of the parietal pleura may extend also through the diaphragm and spread directly over the abdominal peritoneum. Records show that the peritoneum may also be infected with the intestinal tract. We have learned that in many cases the tubercular process extends progressively from the intestinal mucosa towards the peritoneal coat and from this focus the microbes are disseminated by continuity or direct implantation. Stolper, of Berlin, and Murphy, of this city, report cases of this nature.

The acute disseminated forms of peritoneal tuberculosis are in the great majority of cases the result of a tubercular affection elsewhere, and are brought about whenever a vast number of bacilli escape from a tubercular focus and by means of the circulation are directly implanted into the tissues of the peritoneum, and if conditions are favorable each germ upon propagation will be the genesis of a local miliary tubercle.

Stolper cites cases in which the peritoneum was infected from tubercular diseased genitals when the infection was of the ascending form. One can readily understand that tubercle bacilli may gain entrance at the external genitals by coitus, instrumentation, and other sources, and induce changes in the uterus and

tubes. Abrasions and erosions of the cervix open the door for the entrance of bacilli into the lymphatics, which may carry the bacilli to the internal pelvic organs. To uphold the statement, that genital tuberculosis may be the source of peritoneal tuberculosis, I quote Schottlander, who records 30 cases of genital tuberculosis and states that in ten cases the peritoneum was infected from tubercular diseased tubes.

The age at which tubercular peritonitis is most prevalent seemed to be between sixteen and thirty-five.

From a clinical standpoint, three forms of tubercular peritonitis are recognized: 1. Ascitic or sero-exudative. 2. Fibro adhesive. 3. Suppurative, or cheesy, form. In 500 cases of tubercular peritonitis which I have collected from the literature, I found the exudative form in 344, 68.6 per cent; fibro adhesive form in 136, 27.2 per cent; suppurative form in 20, 4 per cent. According to these figures we recognize that the sero-exudative form is the most prevalent and presents the least obstacles to diagnosis. The patient himself notices the enlargement of the abdomen, whereas many of the dry forms are not recognized by the patient or physician.

The characteristic of the ascitic form is the exudate, which according to the suspended cells is transparent or opaque. The fluid varies in amount up to several gallons. It may be free in the abdominal cavity, and assume different locations, with the position of the patient; and in some cases the fluid is kept stationary by the agglutinations and formations of adhesions, which ensacculate the fluid; thus we can understand that tumor-like masses are frequently found by palpation and percussion, and are diagnosed as such. Literature quotes cases in which the physician diagnosed the morbid formation as an ovarian cyst and laparotomy revealed the true nature of the malady. In all cases of this form the peritoneum is beset with miliary tubercles with more or less adhesions between the coils of intestine and omentum. The fluid exerting intra abdominal pressure thus interferes with the visceral and portal circulation.

Adhesive tubercular peritonitis (commonly known as the dry form) is characterized by the agglutination of the intestines with one another and with the parietal peritoneum. In a considerable number, a limited amount of fluid accumulates, and the peritoneum is inflamed and studded throughout with miliary tubercles. At a further stage larger formations prevail, particularly about the intestines. At a still later period the abdominal

cavity may be entirely obliterated by massive unions of its contents, and the surgeon, to his surprise, cannot find a distinct abdominal cavity. If he succeeds in penetrating the abdominal wall and locating a cavity it will usually be limited by adhesions. It is in these cases that the surgeon must exercise requisite skill when incising the abdominal wall. In the literature I find two cases in which the intestines were injured by laparotomy performed for tubercular peritonitis. Even the separation of adherent intestines wilfully or purposely may inflict injuries to the intestinal wall with the consequences of perforation. In the 500 cases which Wunderlich compiled, the adhesive form was present in 136.

In the year 1884 Konig gave us the information that all forms of peritoneal tuberculosis can be healed by a simple abdominal incision. Since then many contributions from various authors have appeared, some condemning the surgical treatment, but it has been upheld by the greater majority.

Statistics compiled from various sources announce that Konig made too liberal a statement when he said "all forms are cured by a laparotomy." From experience we have learned that such is not the case. The operation itself is simple, so one will not be surprised to learn of the low mortality.

Philipps, in the year 1890, compiled 131 cases of tubercular peritonitis in which laparotomy was performed, the immediate mortality being only three per cent. Fehling places the favorable results of the operative treatment at 70 per cent. Schroder, of Bonn, records 24 cases of tubercular peritonitis that were treated surgically, with a mortality of 33 1-3 per cent, 20 per cent were not benefited by the operation, and 42 per cent were cured.

Galvani, of Athens, strongly advocates laparotomy in peritoneal tuberculosis. If after laparotomy the disease does not make favorable progress, or remains stationary, he insists on performing another laparotomy. In one of his cases he opened the abdomen three times within eight months, and a few years later made the fourth laparotomy on account of abdominal hernia, and found that there was complete anatomic restitution of the tubercular process. In another case three laparotomies were followed by a complete cessation of the disease. In 51 of his operations, seven died, three not benefited, in two the disease became more acute, and 39 left the hospital in the best of health.

Dodden cites 17 cases of tubercular peritonitis that were laparotomized; seven died within two to ten months, one im-

proved, and nine were cured by the operation. Frank, an experienced surgeon at the clinic of Heidelburg, found that operative results were favorable in 40 to 50 per cent of the laparotomy cases.

Oshler, of Munich, protests against the surgical treatment of peritoneal tuberculosis, and says that most all communications from surgeons are only information from temporary improvement, that statements concerning the later condition and the ultimate results of such cases do not appear in publications. Oshler bases his authority on 912 tubercular patients that were admitted at the clinic at Frankfurt. In 44 of this number the diagnosis of tubercular peritonitis was established. Oshler could follow the outcome of 39—18 died and 21 are still alive and apparently in good health. A compilation of cases of tubercular peritonitis, medically treated, would certainly be valuable.

However, at the present day, statistics from the surgical clinic show that laparotomy exerts a favorable influence in the majority of selected cases. The profession of to-day will recognize that the clinical history is not yet completely cleared and that much remains to be said concerning the selection of treatment.

That tuberculosis of the peritoneum, like tuberculosis of the lungs, will occasionally heal spontaneously and without treatment, is revealed by three recorded cases of Alterthum, in which the diagnosis of tubercular peritonitis was definitely established. Two to seven years later two of the patients were laparotomized, one for hernia, the other for gynecological reasons, and in both cases evidences of a healed tuberculosis was manifest. The third patient, four years after the primary examination, appeared to be in the best of health. Tscherin likewise reports cases of this kind in which tubercular peritonitis terminated in a complete recovery.

That a complete histologic restitution of tubercular peritonitis will follow an abdominal incision is upheld by the communications from many able surgeons. Hirshberg laparotomized a woman in which the peritoneum was covered with tubercular nodules. Eight months later the patient died of pulmonary tuberculosis. Post mortem examination showed that the peritoneum was smooth and no trace of nodules could be detected. Similar cases are recorded by Ahlfeld, Poucet, Picque, Kauffman, and others.

Of the 344 cases of ascitic tubercular peritonitis previously

quoted, 168 of these left the hospital shortly after the operation and the results could not be determined; the remaining cases remained under observation. Of these, 16 died within two months, 42 died within 18 months; in 41 of the cases there was no relapse of the disease within three years; in 15 the disease still appeared to be cured five to ten years after, and in 38 the fate after the second year could not be determined. Therefore from this compilation we learn the mortality to be about 33 per cent.

Of the 136 cases of the adhesive form that were treated surgically, 15 died a few days later, 20 died after the first two months, 21 died after the first six months—a mortality of 41 pere cent, in contrast with the ascitic form of 33 per cent.

The symptoms of tubercular peritonitis are as follows:

1. Pain in the abdomen.
2. Accompanied with diarrhœa and in a few cases constipation.
3. In the ascitic form there is an enlargement of the abdomen.
4. Intermittent fever, particularly in the afternoon.
5. Increased respirations and more or less bronzing of the skin.
6. Emaciation follows as the disease progresses.
7. Finally in some cases, the diagnosis can only be established by an exploratory laparotomy.

SCARLET FEVER.

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Definition: An acute contagious disease marked by high fevers, a peculiar rash, and sore throat.

Pathology: No changes in the tissues and organs are observed as peculiar to this disease. Acute Bright's disease often complicates it; also in a few cases pyemia is found, but gangrene is rare.

Etiology: The specific poison of scarlet fever has not been analyzed. The fever is not so contagious as smallpox, but more so than measles.

Modes of Infection: Mere contact with a patient affected is sufficient for infection. Inhalation seems to be the main channel

of entrance of the poison, yet evidence exists of its entrance through the blood—open sores and wounds predisposed to infection.

The poison may be conveyed a considerable distance through formities or clothing.

It should be remembered in this connection that the disease more frequently attacks those from the age of two to ten years. It is rare in the first year of infant life, and receptivity is reduced with age.

Season: Autumn and winter are the more common endemic seasons.

Varieties: (1). Scarlatina simplex. (2) Scarlatina anginosa. (3) Scarlatina maligna.

Period of Incubation: A few hours to eight or nine days.

Symptoms: Invasion is usually sudden and may begin with a chill, but quite often it begins with vomiting or convulsions.

The temperature rapidly rises, reaching its acme (104-105 degrees) in twenty-four to forty-eight hours and remains high. The pulse is fast and hard, reaching 130 to 150 per minute quite early in the attack.

Pain and difficult deglutition with fullness and tenderness beneath the jaws are early symptoms. The lymphatics may enlarge, the appetite is impaired, and the tongue, at first coated heavily and having red tip and edges, in a few days sheds its coating, when it presents a "strawberry" appearance. The urine is scanty and high colored and may contain traces of albumin. The bowels are constipated.

Eruption: In six to thirty-six hours the characteristic rash appears. The efflorescence usually, but not always, is first seen upon the neck and chest and rapidly spreads over the entire cuticular surface. It may be discrete or uniform. It disappears upon pressure, a white line continuing for a second or two when the finger is drawn through it. If the efflorescence be closely inspected, it will be found punctiform.

The efflorescence appears on the pillars, tonsils, uvula, and in the pharynx.

In four to seven days the rash fades and desquamation begins.

In uncomplicated cases the duration of the fever is from five to nine days, falling by lysis.

The nervous symptoms are sometimes pronounced. Sleeplessness and delirium are common in some cases, while a few

cases may be sleepy with delirium. Convulsions appearing late in the disease should be regarded with suspicion, since they are most probably uræmic.

Anginoid Variety: This form will be recognized by the severe throat symptoms, the much swollen tonsils, which may be covered with a false membrane, the ulcerations that may be present, the more extensive lymphatic involvement, the high temperature (105-107 degrees), and the profound prostration. Diarrhœa is common and troublesome.

Malignant Variety: This variety has an abrupt onset, hyperpyrexia, a feeble and rapid pulse, and delirium followed by coma. Death may occur before the appearance of the rash; or should the rash appear, it may be livid or petechial and grow in large echymosed blotches. Hemorrhages also take place from mucous surfaces and hematuria is common.

Complications: Nephritis is a frequent complication of scarlet fever, or as a sequence it may complicate convalescence from the fever. Most generally this latter condition obtains. Death may suddenly occur from it although a few minutes before the little patient was apparently improving. The urine therefore should be frequently tested and the symptoms of nephritis elicited, especially in slow convalescence. Other complications, as otitis media, pyemia, etc., may be present.

Diagnosis: The short period of incubation, the persistent vomiting in the early stage, the high temperature, the hard, wiry and fast pulse (130 to 160), the early punctiform efflorescence, the sore throat and hyperemia of mucous surfaces, differentiate it from other exanthematous diseases.

Prognosis: This should be favorable in uncomplicated cases. It should be guarded in the badly complicated and in the malignant forms.

Treatment: It is very important, as this is a self-limited disease, for the physician not to attempt to "jugulate" nor to complicate it by indifferent medication. He should, however, aid nature all in his power, ever careful not to depress her, but to administer to her wants.

The mild cases do not need much, only time, ventilation, and frequent tepid sponge baths, with the proper diet and nursing. It is, however, in all forms, quite essential that the temperature of the room be maintained at a uniform point (65-70 degrees).

The medicinal agents in the mild form are sp. veratrum for

the temperature and sp. asclepias to determine to the surface. The bowels should be moved daily with the syringe.

In the nervous types, not only is it necessary to guard against nursing, but medicinal agents are necessary.

A given case has a small and frequent pulse with high temperature. It demands the use of sp. aconite.

The eruption is tardy and the integument is congested. Sp. belladonna should then be added to the aconite mixture, as:

℞

Sp. aconite .....gtt. iij—iv
Sp. belladonna .....gtt. iv—x
Water .....(q. s.) oz. jv

M. Sig. One teaspoonful to be given every half to one hour.

Another case is sometimes presented when the eruption does not remain on the surface well, but a tendency to retrocession seems persistent; the patient has hurried but obstructed breathing, and the pulse, although frequent, shows precordal oppression; the lips and face may be cyanotic. This patient is benefited by inducing gentle emesis with lobelia.

When there exists a broncho-pneumonia and a consequent tendency to syncope, or when the pulse is weak, although rapid, and the patient is suffering with a restless delirium, the carbonate of ammonium should be given every hour in simple elixir, in doses of one to five grains.

Sp. rhus tox is demanded in those cases when the pulse wave is sharp, the skin burning, and the tissues about the eye are pinched.

Sp. jaborandi should not be omitted in a case having a hard pulse, dry skin, dryness of tissue of mouth and throat, and scanty urine of dark color.

Sepsis: Septic conditions may arise in very bad cases, and should receive prompt attention.

If the abdomen is rather full, the pulse open, the face dusky, the tongue full, the mucous membranes of throat purplish, sp. baptisia should be administered. Sodium sulphite should be given that case having flabby tongue, coating pasty, and the tissues of throat full and pallid.

Echinacea is called for by those cases having purpuric spots and putrescent discharges from mouth.

Ailanthus acts favorably in some cases where extreme adymania exists and blood poisoning is manifest.

Throat Lesions: Crushed ice, while valuable in all forms to allay thirst and cool the mouth and throat, is especially useful in those cases where the tumefaction of tongue and pharyngeal tissues are due to the presence of the efflorescence.

If the tissues of the throat are secreting and ulcerations are imminent, the following should be sprayed into the throat often:

℞

Salicylic acid (winter green) .....oz. j
Sodium borate .....oz. ij
Water .....(q. s.) oz. jv

M. Sig. Use as directed.

This will be found useful, also, sprayed in the nasal passages if they are involved.

If the tissues are much swollen and enfeebled, they should be thoroughly and frequently swabbed with the following:

℞

Sp. myrica .....parts iij
Tr. capsicum .....parts j

M.

If the mucous surface have a tendency to putrescence, a strong infusion of baptisia tinctora should be applied several times a day.

If ulceration does occur, the ulcers should be kept cleaned with hydrozone. Cauterization is unnecessary unless the ulcers be phagedenic, when nitric acid should be judiciously used. In all these cases poultices should be used externally, and an onion poultice is the best.

The lymphatic glands should be incised as soon as the evidence of pus is elicited.

When it is reasonably certain that pus is present in the middle ear, paracentesis of the membrana tympani should be utilized. Other complication must be met.

Convalescence: The convalescent period must be guarded. Ventilation, bathing, and disinfectants must still be maintained. The diet, which at first should be liquid, may be gradually changed.

If post-scarlatinal nephritis complicates, it must be treated according to indications.

If dropsy follow, the conditions, not the name, should be treated.

Apocynum (Sp.) is indicated by the feeble pulse (not the full and strong pulse), the anemia, and the general sarcous condition. It should be given in an infusion of digitalis, if the heart is dilated and the pulse is weak and irregular. It should be combined with specific acids when there exists a constant but ineffectual desire to pass urine, or when the urine is dark and bloody.

Oxydendron (solid extract or decoction) is also an agent of superior merit in dropsy. It may be given in those cases where portal congestion is present and torpor of kidneys exist. If full tongue, full veins, and general sympathetic depression is manifest, its administration should be preceded by a cautious use of podophyllin. It materially aids apocynum in atonic cases. It can be safely given where a hard pulse obtains with acceleration of temperature. Of course sp. veratrum should be given as an auxiliary in such cases.

Other agents may be required by the conditions present.

ARTERIO-SCLEROSIS.

WM. H. RUSSELL, M. D., LL. B., IPSWICH, MASS.

A correct understanding of the pathology of diseases of the arteries is of great importance to the physician. The term arterio-sclerosis is not found in medical works published prior to 1887. Arterio-sclerosis, atheroma, and calcareous degeneration have been used synonymously and interchangeably by medical authors in describing diseased conditions of the arteries.

I shall quote quite freely from an article by Dr. Wm. Russell, of Edinburgh, Scotland, published in *The Medical Examiner and Practitioner* for August, 1901:

Arterio-sclerosis and atheroma are two totally distinct conditions, as viewed both from a pathological and a clinical point of view. Atheroma is a localized patchy affection of the arteries, consisting of degenerative changes, which long have been recognized. Arterio-sclerosis is characterized by a generalized affection of the arteries, characterized by (a) thickening of the middle coat, this thickening being a true hypertrophy, which may

ultimately show some degeneration; (b) thickening of the inner coat from fibrous hyperplasia of the sub-endothelial connective tissue, without atheromatous degeneration; (c) in some cases thickening of the tunica adventitia.

In the kidneys the thickening of the inner coat is proportionately greater. Outside the kidneys the thickening is most marked in the middle coat.

The diagnosis rests upon the condition of the radial arteries. The condition of the radial should be taken as an index of the condition of the arteries found in other parts of the body. The artery as felt under the finger is hard, like a whipcord, indurated, and the thickening is uniform. In atheroma the thickening is not uniform, and presents patches of calcification. This hard, cord-like feeling of the radial artery may be mistaken for "high tension" pulse, whereas the hard, cord-like feel is due to thickening of the vessel walls, and not to increased blood pressure. This is of importance in the prescribing of specific remedies. It is obvious that a remedy indicated for a high tension pulse, due to increased blood pressure, would be out of place in arteriosclerosis, with thickened arterial walls and low blood pressure.

The character of the pulse varies with the condition of the vessel wall. A diminution of the normal capacity of the vessel may result temporarily from spasm, or the oft recurring increase of the contractibility of the vessel may occur as the result of stimulation of the normal contractile power of the muscular coat of the vessel. This causes a diminution of the blood carrying capacity of the vessel, from a diminution in the size of its lumen. There is a general tightening up of the vessels resulting from this cause. The primary cause of tightening of vessels is due to the introduction of poisons into the body, either from without or as the result of autointoxication, from faulty digestion, retention of waste matters, etc., oft recurring, or continued tightening of the vessel leads to hypertrophy of the muscular coat of the artery as the result of increased action. This accounts for the thickened middle coat. The thickened inner coat is due to the circulation in the blood of noxious principles, which irritate the sub-endothelial tissue, resulting in hyperplasia.

Arterio-sclerosis may be caused by the poison of syphilis, rheumatism, gout, renal disease, errors of digestion, absorption of toxines, etc. We many times in our diagnosis and treatment of heart disease or renal disease forget the arteries, which play such an important part in the circulation of the blood.

In July of last year I was called to attend a man, 75 years of age, who had been for years a sufferer from chronic rheumatism. Two years previous to my taking charge of the case he was dining at a restaurant. Suddenly he arose from his chair and, without coat or hat, walked down the street. He walked some distance, when he took the railroad track, during this time being unconscious of his acts. When he became conscious of his surroundings he found himself on a high trestlework, gazing down between the ties into the river, rolling along many feet below. He had several attacks of a similar nature, when he would wander around the house in an aimless manner, apparently searching for something, yet totally oblivious of his surroundings.

When I saw him he was suffering with enlarged prostate and chronic cystitis. He was suffering intensely, being obliged to use a catheter hourly. The arteries were thickened uniformly, pulse intermittent. At times he would be quite comfortable, again there would be tightening of the arteries and intense pain in the back and legs. The legs became covered with large purple spots, some as large as my hand. But the tightening of the arteries was a very prominent symptom. At my morning visits I would many times find him comfortable. In a few hours I would call, to find him, as I frequently expressed myself, wound up. He finally died of exhaustion and uremic poisoning. He had always been a man of exemplary habits. Arterio-sclerosis is a disease of importance the prevention of which would seem more promising than the cure.

SCARLATINA — SIMPLEX, ANGINOSA, MALIGNANT AND HEMORRHAGIC.

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Scarlatina is a disease of childhood, and all mothers dread the name. A person seldom escapes an attack until puberty. Unlike measles, however, it is milder as the patient grows older. It is considered contagious and infectious; but in my experience of thirteen years the disease has failed to demonstrate itself as such, and I am forced to doubt. I cannot understand why, if it is so contagious and infectious, one or two members of a family

will develop cases of all stages and two or three members of the same family escape.

I believe the eruptive fevers and diphtheria are developed by internal causes peculiar to the patients, and not by contact. If this is not so, how do you account for so many exposures escaping and for the isolated cases? The majority of physicians would make one believe that coming in contact with a patient suffering with scarlatina—or even a member of the same family—would make escape impossible.

I will not dwell on the etiology of the symptoms only as I attempt to describe the different stages.

Scarlatina simplex is the most common of the different stages. Ushered in usually, as any fever, by a chill, which may be slight or severe, the fever often running as high as 105 or 106 degrees F. A severe headache with slight sore throat and difficult deglutition may appear at once, with vomiting and general uneasiness. The face and neck become very red, which disappears on pressure, only to reappear on removing the finger. A general disturbance of the special senses is often present, the eye being particularly sensitive to light. In from twenty-four to thirty-six hours, usually, we have a defined eruption appearing when the fever begins to abate, and in from three to five days the redness disappears, with desquamation following.

In scarlatina anginosa the symptoms are all aggravated and the fever is intense. The skin is dry and burning and the patient very irritable and nervous. The throat becomes affected to a marked degree, often ulcerating, and the lymphatic glands about the neck are affected almost to a degree of ulceration.

The throat affection is the most prominent feature, the secretions often being so viscid and tenacious as to cause great anxiety and distress. The fever, under proper treatment, commences to abate when the eruption has appeared, and usually disappears by the fourth or sixth day, when desquamation usually commences.

Malignant scarlatina is of two kinds, the distinctive symptoms being marked. In one case the chill is of long duration, the prostration severe, the child is dull and stupid, the tongue broad, flabby and coated with a foul, dirty mucous, while febrile reaction comes up slowly, the extremities being cold and the body hot. The eruption usually makes its appearance slowly and the redness is more or less dusky. The throat affections possess the same characteristics. Ulceration is very frequent with a tendency to phagedena. The cervical glands become

troublesome, there is difficult deglutition and respiration, and the mucous membranes present a dusky appearance. As the disease progresses the symptoms are all of a typhoid character. The dark tongue, sordes on the teeth, feeble pulse, marked depression of the nervous system, diarrhœa in some form, tympanites, and numerous other conditions and symptoms to fear.

In the second case the disease exhibits but few premonitory symptoms. The patient is attacked suddenly, the chill being of short duration, not well marked and the febrile reaction intense. The skin and mouth are very dry. The eye is bright and painful. The patient complains of acute pain or is delirious. Nausea and vomiting appear at once, and often the stomach will retain nothing. The patient, from the intense reaction, falls into a state of complete relapse and dies. In these two forms we have trouble with the eruption. In one case it appears and then retrocedes, and in the other it is impossible to determine it to the surface. In either case the results are to be feared.

Treatment: In this disease we must adopt some well defined line of action that will benefit our patient. Experience and observation has taught us that the higher and longer the fever runs before the eruption appears, the greater the danger and the patient becomes critically ill. In all cases it is important to use such remedies as will control the fever and hasten the appearance of the eruption. Keeping the secretions free during this period of the disease is very important, hence free use of the warm alkaline sponge baths carried out with regularity and the special sedatives given as indicated. For the throat trouble usually the vinegar packs, applied externally every one or two hours, will be sufficient after twelve to twenty-four hours to relieve all disagreeable symptoms. This treatment will usually be sufficient in all simple forms of the disease. In the anginose form the plan of treatment is very much the same. Aconite, belladonna, gelsemium, phytolacca and echinacea being the class of remedies employed. A solution of chlorate of potash will be found excellent for a throat wash and spray in connection with the steam atomizer with vapor of vinegar. I use the vinegar full strength and also apply it to the outside the same. If enlargement of the cervical glands ensues during convalescence, an alterative treatment will be necessary during this period.

In the malignant form the symptoms and conditions to battle with are of the most aggressive nature. Everything about the patient indicates danger and the disease runs its course rapidly

and invariably proves fatal in a few days. Aconite and belladonna are to be given as sedatives and the free use of the sponge bath with regularity. Echinacea, phytolacea decan. soda sulphite, sol. sulphurous acid and pot. chlorate are the antiseptics to employ, the remedy and size of the dose as best adapted to the patient's condition and age. Baptisia tinct. may also be given internally and an infusion used as a gargle. The throat in this form of disease must receive more heroic treatment than the milder forms. The steam and hand atomizer must be freely used with an infusion of baptisia tinct. and vinegar, diluted or full strength.

For an external application to the swollen glands of the neck, hot poultices, camphorated oil, iodine and soap liniment will greatly relieve the inflammation and swelling. We have in this form the serious conditions that are present in typhoid fever, viz., typhomania sordes on the teeth and in the roof of the mouth, the dry, parched, brown tongue, with peritonitis and a general depression of the vital forces, with a low muttering and a difficulty in articulation, this condition lasting but a few days, the patient either improving by the eruption making its appearance, or the depression becomes so great the patient falls into a state of collapse, posture is supine, with a tendency to slip down to the foot of the bed. Subsultus comes on with picking at the bedclothes; this is followed by involuntary passages of the urine and feces with complete prostration from which the patient dies. I have been unfortunate enough to lose a patient in thirty-six hours and have them live for a week in this condition and then pass away. I believe any candid physician of experience will admit that a very large per cent of this class of cases prove fatal regardless of the school of medicine or the physician who is in attendance.

THE MORPHINE AND WHISKY HABIT.

(A New Treatment.)

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The mind of the layman, in medicine as well as that of the thoughtless physician—and alas there are such—is prone to accept any statement as true which promises any quick relief from any serious or very distressing malady, even though it were self-evident that such relief is impossible when the pathological and the perverted psychology of the patient is considered.

A little more than a year ago I became acquainted with a man—not a physician—who was advertising a cure for the morphine and whisky habit in from three to six days. And, what was more astonishing, he seemed to be curing.

After watching some of his cases pretty closely for some months I became satisfied that he was using a remedy that really had a wonderful and marked influence upon the peculiar craving of the nervous system for narcotics. I put myself in position to obtain the "formula," and found that it contained but a single remedy, namely, hyoscine hydrobromate. Under his use of the drug, he destroyed any desire on the part of the victim for the accustomed narcotic in from three to six days—at least for the time being.

But was the patient cured? Hardly! Let us consider for a moment the condition of a person suffering from chronic alcoholism in the class of periodic drunkards. During the periods of drinking, most persons give themselves up to unrestrained debauchery and vice, and when either their money is exhausted or their stomachs refuse longer to tolerate alcoholic drinks, they stop as suddenly as they started, and in two or three days return to their customary work with as much correctness and diligence as the ordinary citizen.

In nearly all these cases of periodical drinking the intervals of sobriety become shorter, the periods of debauch occur more frequently, and are more liable to end in delirium tremens, or permanent gastric, hepatic or renal disease; or, escaping these, in the final development of alcoholic dementia.

The most singular features presented in the early history of these periodical drinkers are the recklessness of their periods

of drinking while they last and, for the most part, the practice of abstinence during the intervals. During the former their mental emotions and illusions are such as prompt strongly to acts of licentiousness and the indulgence of unprovoked jealousies, while in the interval, the larger proportion of them at least, are chaste, upright, affectionate, and deeply humiliated by their previous conduct. And yet, despite their earnest resolutions and pledges, when the time comes around, the most trifling thing, often without the slightest apparent reason, will cause them to plunge into another debauch. Members of this class are to be found in all ranks of life, and it has long been a mystery, not only to their friends, but to the physicians and moralists as well, why men of this class—intelligent, refined and eminently respectible, as many of them are, at least in their early years—can continue to repeat such apparently causeless periods of revelry and disgrace, the consequences of which they are fully aware during the interval.

The strictly periodical return of active phenomena, the tendency to gradually shorten the intervals as the years pass, and the observance in many cases of the fact that each returning debauch was immediately preceded by certain mental conditions, have led to the suggestion that these patients were laboring under some obscure disease in the cerebral nervous centers, analogous to that of epilepsy and other recurring neuroses.

It is alleged by many writers that a large majority of this class derive their tendency to periodic drink from hereditary influences. While heredity is a potent factor in some cases, to my mind it is wholly inadequate to explain the origin or such tendencies in some others.

Clinical observation has shown that a large number of this class of drinkers have resisted every means devised for their permanent cure. But a smaller ratio have recovered, and doubtless the same result could be obtained in a much larger number if they could be placed under the most favorable influences during the early part of their career.

It is plain to any careful observer that the cure of a periodical drinker in a period of thirty-six hours is necessarily an impossibility. The long continued use of alcoholic drinks is capable of inducing all grades of mental impairment. From simple weakness to complete dementia, those who drink to such excess as to become either habitual or periodic drunkards, and are not cut off by delirium tremens, *mania a potu,* or vicereal diseases before

the near approach of old age, rather uniformly develop symptoms of progressive mental impairment caused by pathological changes in the membranes and substances in the brain, resulting from long continued contact with alcohol.

These results, however, are not entirely limited to those who drink enough to be recognized as inebriates; but there are many of both sexes who make liberal daily use of alcoholic stimulants for many years, without ever becoming greatly intoxicated; yet later in life they develop all the phenomena of alcoholic dementia.

Nearly all patients afflicted with alcoholic dementia present, even from an early period, an anæmic look, and are affected with more or less gastric or duodenal irritation, rendering digestion imperfect. The excretory functions of the skin, liver and kidneys are also frequently disordered. In all chronic alcoholics are found thickening and opacity of the pia mater and arachnoid, with thrombi or varicosities in the vessels of the dura mater, and sometimes hemorrhagic spots and more or less serum on the surfaces and in the lateral ventricles.

The convolutions, especially over portions of the cerebral hemispheres, appear most frequently pale, shrunken and harder than natural, though in some cases there are limited regions of increased redness of less density. These appearances are caused mostly by more or less atrophy of the nerve cells of the gray matter and either sclerotic or fatty changes in the connective tissue. Fatty or atheromatious changes in the coats of the cerebral vessels are also present in most instances. Numerous small cystic degenerations have also been described by some observers.

It is to these various and extensive degenerative changes in the cerebral structure that the patient owes the loss of his mental faculties. It necessarily follows that recuperative action for a long time must take place in order to produce any permanent improvement.

The havoc wrought in the tissues of the system by the habitual use of opium or some other drug is somewhat analogous to that caused by alcohol. The morbid anatomy of the organs of the opium habitué is at present but little understood; at least, insufficient data have been collected to prove of any great value. There is but little doubt, however, that the ultimate results of the habit, which we find principally in the gastro-intestinal tract and the kidneys, are effected throughout by some pathological

action of the drug on the cerebro-spinal, sympathetic and central nervous system. As yet we are ignorant of what changes take place in the nerve tracts as a result of the habit. Probably they are in a large degree similar to the changes produced upon the same system by alcohol or other stimulants, and are degenerative in character.

Experience would seem to teach that the great nerve centers tolerate stimulation only up to a certain point; beyond that they weaken, lose their normal and healthy action upon other tracts and organs with which they are physiologically connected, and ultimately, if the artificial stimulus is not removed, undergo retrograde changes.

The gastro-intestinal tract is generally among the first to suffer from indulgence in the habit; but the changes affected here are only secondary in character, and due to primary changes in the nerve-centers supplying the glands and blood-vessels of the region. Thus there is always found in the stomachs of opium habitués a chronic gastric catarrh, with the character lesions of the disorder. This gastritis is, however, secondary. Opium, through its action on the nerves supplying the glands of the stomach, checks their secretions. This delayed and diminished action by the gastric juice causes imperfect and delaved digestion. The ingesta pass through the stomach in a half-digested state, and produce the usual consequences of congestion and subsequent hypertrophy of all structure. The same results occur in the intestine.

The most constant pathological action of opium is the paralyzing of function in the various secretory glands. As has been said, this is due to some previous morbid changes produced in the nerve-tracts supplying the glands. We may witness this same effect in the sebaceous, mammary and the salivary glands, in the ovaries and in the testicles. The normal secretion of each is checked, and therefore in habitués we find diminished secretions, with consequent impairment of function in these several glands. When opium is taken in minute doses, and for the first time, there is exhibited a stimulant action, and very likely at this period may be a slight congestion of the several glandular organs. Experiments on animals show that under the influence of morphine the kidneys are much congested, and probably on this account there is more or less secretion of albumen in the urine. But the ultimate effect of opium is to paralyze normal glandular action, and hence to diminish the various secretions.

The treatment of the opium and the whisky habit is not very dissimilar. The patient should first have a thorough cleaning out of the alimentary canal by the use of a saline cathartic solution; sufficient sulphate of magnesia or phosphate of soda should be given to thoroughly empty the bowels the night before beginning the treatment. The patient should have a hot bath and placed in a well ventilated room, with convenient water-closet and quiet surroundings. There should be well trained nurses in attendance and every facility for the comfort of the patient and nurse for a period of about three days at the least.

If we are treating the patient for the opium habit, for instance, the injection of a solution of hydrobromate of hyocine should be begun as soon as he insists upon having some morphine or opium. No morphine should be allowed after the thorough operation of the cathartic.

The solution of the antidote should be prepared as follows:

℞

Hyoscine hydrobromate	gr. j
Alcohol	drachms j
Distilled water, q. s.	oz. iiij

Mix. Ten to thirty drops, hypodermically.

Usual antiseptic precautions should be taken in using the hypodermic syringe. The initiatory dose should be fifteen minims. After waiting thirty minutes to two hours, a dose of ten minims can be given. This dose should be repeated every thirty minutes or diminishing to five minims as the condition of the patient indicates.

Many patients after the second dose fall asleep, and do not need the dose repeated until they awake. Others become very restless, throwing themselves from one side of the bed to the other, and are apparently in great distress. On examining the pulse and respiration, you will find them normal and regular. The remedy produces more or less delirium, with hallucinations, a slight flushing of the face, some dilatation of the pupils, and more or less dryness of the throat. The patient should be allowed all the water that he craves.

The remedy should be pushed until the patient is quiet from its effects; and the dose should be repeated sufficiently often to keep the patient under the influence of the drug for twenty-four hours.

The diet in the meantime should be light but nutritious,

and taken at the ordinary intervals. In some cases the bowels move three or four times in the twenty-four hours, and should always move once in the twenty-four. Occasionally a patient vomits dark-greenish-brown material. This is not a bad symptom. During the first twelve hours, if the patient shows signs of collapse from the withdrawal of the morphine, a dose of one-tenth the size of the habitual dose may be given. No morphine should be administered after twelve hours of the treatment. At the end of twenty-four hours the patient may be allowed to come out from under the influence of the antidote, and if there is the least desire for morphine he should be again placed under the influence of the remedy, and kept there for another twenty-four hours.

Usually at the end of thirty-six hours he has no desire for the morphine or the whisky. During the treatment the patient should have a bath every twenty-four hours. After this course of treatment the patient should be placed upon a nerve tonic containing nitrate of strychnia, tincture of avena sativa, and passiflora. This should be taken three times a day or oftener, if necessary to keep the patient entirely comfortable. The increase in appetite and feeling of physical well-being of the patient for the few weeks following the treatment is astonishing to one who has never observed it.

The initiative treatment entirely removes the craving for the habitual drug for the time being and puts the patient in condition for the proper hygienic, social and therapeutic measures necessary to gradually restore the system to a healthy condition. If the patient really has a desire to quit the habit, and his condition be properly looked after for a number of months, in a large majority of cases the cure can be made permanent. In the periodical drinkers the best time to begin the treatment is at the beginning of a debauch, and the remedy should again be resorted to on the first appearance of a desire for drink on the part of the victim. I have found it the best remedy for the sobering of a drunken man that I have ever used. It is something marvelous in its effects. I am satisfied that this remedy is the best one ever discovered for the treatment of these conditions, and so far as I have witnessed no permanent deleterious effects came from its use. However, we must not expect a few days' use of any remedy to overcome the effects of structural changes brought about by years of abuse with alcohol or opium.

PLEURO-PNEUMONIA.

L. S. Downs, M. D., Galveston, Texas.

Without giving the etiology or pathology of this disease, I will proceed with the clinical history of a case which occurred recently in my practice.

On March 4, 1902, I was called hurriedly to see a girl of seven. She was manifesting alarming symptoms simulating acute poisoning—retching, vomiting, with marked prostration and convulsions.

Learning that she was seemingly in her usual health a few hours previous, and that she had a short time before the attack eaten a small can of wienerwurst, I at once diagnosed acute poisoning, and treated accordingly. The gastralgia and other stomach symptoms continued unabated. The spasms soon ceased and left the patient prostrated. Retching and vomiting continued with but little change for twelve hours.

In the meantime a severe pain had commenced at the angle of the twelfth rib on the left side, extending gradually to the left shoulder and arm. This became so severe, and not abating by the usual treatment, I was urged by the parents to give a hypodermic of morphia, which I reluctantly did. The pain and vomiting were relieved and the child slept a few hours, but awoke with conditions unchanged. The fever had gradually risen till it now registered 104 degrees F., where it remained with little change till the morning of the 12th, when it began to decline, but arose again to 105 degrees on the 16th. The pulse and breathing were markedly accelerated, the former ranging from 120 to 140 and the latter from 45 to 60 per minute. There was no œdema or external evidence of accumulation or effusion. No cough, rales, or fremitus; no abnormal sounds on percussion or auscultation. There was no unilateral enlargement or bulging of intercostal spaces.

On the morning of the sixteeenth day a slight crepitus was discernible just above and to the right of the left nipple. This gradually extended to every part of the left lung, and in twelve hours it was hepatized and fremitus was marked. The cardiac beat was now readily observed through the chest wall near the right costo-clavicular articulation and dyspnœa was marked.

There was still no cough or expectoration. The pain and soreness continued over the whole left chest, but was more severe in the region of the angles of the last three ribs.

The parents positively refused to grant an operation or even an exploratory puncture at any time. The treatment was specific, and consisted of echafolta, asclepias, calcium sulphide, etc., throughout.

On April 2d a slight resonance was discernible to the right and slightly above the left nipple. This slowly extended, but in circumscribed areas, till it reached the full circumference of the lung, leaving hepatization in the central portion up to present writing, May 15.

The gastric disturbance remained through the whole attack. Tympanitis and tenderness was marked at intervals and green muco-purulent stools were frequent, following administration of oil or citrate magnesia. The urine was normal in quantity and free from deposits of any kind throughout the trouble.

After the third week the pulse continued from 120 to 130 per minute. The temperature after the fourth week ranged from 100 degrees in the morning to 102 degrees at night, falling to normal and raising to 100 degrees after May 2d several times in the twenty-four hours. On April 24th, after a severe coughing paroxysm, quite a quantity of green sputum was discharged, and from that date more or less coughing was manifested and a greenish-yellow sputum, occasionally copious, was coughed up.

Milk constituted the principal diet. Cider, fruit juice from orange, lemon, pineapple, strawberry and blackberry was used freely. The child is now able to be about and is gaining flesh and strength rapidly.

The peculiar characteristics of the disease are: The strange premonitory symptoms of the stomach and bowels, absence of cough and expectoration in the early part of the disease, the location of the heart, and total absence of the usual symptoms of effusion.

NEPHRITIS.

P. J. STOUFFER, M. D., PITTSBURG, PA.

Nephritis is an inflammatory disease arising from cold, some injury or circulatory derangement, and is primarily manifested in three forms, acute, sub-acute, and chronic, the acute form being the less frequent. The kidneys are well protected, being deeply seated, as shown by anatomy. Disease occurs from accidents which affect tissues within the limits of their operation, as well as from cold, from atmospheric changes, which almost invariably retards circulation, closing the secretions and excretions. Inflammation sets in from the local irritation, and also from the retention of urine, which may extend to the end of the urinary appendages. Usually only one organ is affected at one time, although both may be involved, making the case more severe.

ACUTE NEPHRITIS.

In acute nephritis, the inflammatory stage begins usually with marked chills and rigors, and with fever, followed with tensive and excruciating pain in the loins and kidneys as if they were being torn from their moorings, extending down the hypogastrium, following the course of the ureter to the testes of the male, even causing retraction, or to the bladder of the female. The pain is often more severe or restricted when stooling or micturating. At first there may be very little change in the character of the urine, and again the quantity may be very much diminished and difficult to void, of a dark-red color, often streaked with blood; especially is this present if both kidneys are involved.

In the advanced stage of the disease, if the calyces and pelvis of the kidneys are affected, we find more mucus and pus floating in the urine. This is very marked the second or third day, and is generally followed by nausea and vomiting. At times the stomach revolts at water, yet at the same time there is a craving for it; the bowels are obstinate, the patient's skin becomes dry and hot, with vibratile pulse. This demands Lloyd's specific aconite five to ten drops, and Lloyd's specific asclepias tuberosa ten to twenty drops, in four ounces of water, alternated with ten to fifteen drops of Lloyd's specific veratrum viride,

Lloyd's specific gelsemium ten to twenty drops, in four ounces of water. Dose one teaspoonful every thirty to sixty minutes in alternation.

If a brickdust deposit shows, add to the latter ten to fifteen drops of epigæa and use to induce free perspiration for reduction of the inflammatory stage. This should be continued throughout the nervous, irritable and restless condition and inability to sleep with the eyes closed. Should the secretions continue scant and a muttering, comatose condition appear, then the case will undoubtedly terminate fatally, and that very soon. But if only one kidney is involved, and the disease continues in a progressive form without change for the better, we may look for a rapid progress of typhoid symptoms, which will terminate in six to twelve or fifteen days, generally with a favorable ending. If on the other hand we find both kidneys affected, a heavily coated tongue and typhomania, if not arrested by efficient remedies and the best of care, death inevitably follows.

A post-mortem examination and dissection will invariably show an enlarged condition of the kidney in the portion affected, this part showing a deep red portion before the formation of pus cells. Sometimes we find the brown appearance, or ecchymosed condition. This motly form tells us that pus has already formed and is prominent on the surface of the kidney as a No. 6 shot, of red and brown mottled condition of tissue, and hard. In others we find accumulations of pus, with marked softening of the organs, showing great depression of vital power.

A summary of specific conditions for specific treatment: For a feeble pulse use five to ten drops of aconite in four ounces of water. Dose one teaspoonful every thirty, forty, to sixty minutes, to secure a moist condition all over the body. If the pulse is full and bounding, flushed face, irritable and restless, I would give specific veratrum viride from ten to twenty drops, specific gelsemium from thirty to fifty drops in four ounces of water; a teaspoonful every forty to sixty minutes. In case the pulse becomes feeble, alternate with specific aconite. Where there are pinched features and a sharp stroke of the pulse, with frontal pain and throbbing, boring conditions, I would use specific rhus, five to ten drops instead of specific gelsemium.

In the advanced stage we find pus floating in the urine, with a constriction and pain at the base of the brain. We would use specific viburnum opulus and specific eryngium and apis melifica for burning in the bladder and urethra. Should the patient be

drowsy and sleepy, or develop coma, I would give belladonna ten to twenty drops in four ounces of water.

Nephritis requires great care and watchfulness in the selection of remedies. If the tongue turns brown or deep red, face pinched, with sordes forming on the teeth and lips, the bowels should be moved with fluid extract of jalap and senna or any form of physic that will carry off the effete matter readily. I always insist upon a hot sitz bath, as heat aids very materially in the reduction of the distress, and also of the acute congestion; the hot water bag to the spine and lumbar region, also dry cups, or a hot bath of sodium chloride are very important. Wrap the patient in a woolen blanket, drawn around the neck and body to protect it from drafts, then pour the hot sodium chloride and mustard water on the shoulders and over the body, as warm as can be borne, so as not to burn; repeat it from two to six times a day if the patient can endure it. Wipe the skin dry with gentle friction down the spine. If not too weak, follow again in two or three hours with dry cupping to each side of the spine. In case the tongue is cracked I would use twenty to thirty drops of specific eupatorium purpurium (gravel root), as it acts in a soothing manner on stomach and kidneys, ureters and urethra.

After the patients have had the benefit of the baths, they should be tucked in bed and the hot application applied much of the time, as there is nothing that will allay pain and afford relief with such grateful feelings as moist heat in the elimination of the unceasing discomfort of the patient. See that the bowels have been freely opened and the skin resumes its normal condition, and then we can use more gentle agents and those that influence the mucous surfaces, as marsh mallows, verbascum, hydrastus, ailantha, conium, galium, and collinsonia.

In case of hemorrhage from the urinary organs I would use thirty drops of specific hamamelis and ergot or ten or fifteen grains of gallic acid to a glass of water. The dose is one teaspoonful every hour until the hemorrhage ceases. Should the bowels become constipated, that means a relapse, and I should use the hydrastus and sodium chloride solution as an injection, and should use such other diaphoretics as will bring the result in a natural way. To aid the secretions, I use hydrochloride of ammonium, or potassium chlorate (but sparingly of the last named). I would use these to influence the urea in the system. Opium might be used where the patient cannot rest, and there is no indication of uremic poisoning. The objection to this agent

is that it retards the normal kidney action and tends to suppression, a fatal complication. I would prohibit alcoholic stimulants in such conditions. If the urine fails to secrete for 36 to 72 hours, death is almost sure, unless the kidneys can be induced to act by the treatment given.

SUB-ACUTE.

In the sub-acute form our patient will experience a sore, bruised feeling in the lumbar region, over one or both kidneys, when the pressure is made which communicates to the ureter, with intense pain in the kidneys and the ureters, as well as giving pain in the hips—the urine being of a dusky red color and scant, with much misery in voiding as it is eliminated through its channel. Here, also, the tongue becomes foul, the appetite and the patient's strength soon fails; the skin is hot and dry, with sharp, shooting pains and emaciation. These symptoms may continue for weeks. Often ulcerations occur, fever sets in, and life soon ebbs away.

CHRONIC.

The chronic condition of the kidneys is never so marked, although there is considerable lesion and soreness in the loins, which is more noticeable some days than others, and more prominent on violent exercise, giving rise to a scanty secretion of very dark urine, with much distress in voiding. The skin is hot, the tongue white, with deep red fissures lengthwise and diagonal. This portrays trouble sooner or later. The bowels are constipated, ulceration and fever develop, the patient sinks gradually. The conditions in the sub-acute form are in some respects similar to the chronic. The urine is sometimes scanty, at other times profuse; the languid, sore, depressed feeling continues more and more; there is a burning, boring sensation over the kidneys, producing a weakened condition in the loins, interfering with locomotion. In this condition I would use a capsule of sodium phosphate, four to six times a day, with the following prescriptions:

℞

Specific eupatorium (gravel root)	gtt. xxx
Specific hyoscyamus	gtt. xxx
Specific jaborandi	gtt. xxx
Specific capsicum	gtt. x to xv
Aqua q. s.	oz. vi

Mix. Sig. One teaspoonful every hour.

If the urine scalds, add specific apis melifica from ten to twenty drops. Keep the bowels open, once a day at least, with the following:

℞

Podophyllum	gtt.	xxx
Chionanthus	gtt.	xx
Capsicum and mentha piper	aa gtt.	x
Aqua	oz.	iv

Mix. Sig. One teaspoonful two to four times a day until the result is obtained.

We often find conflicting conditions present, such as sharp, cutting pains. Here I should give ten drops of specific black cohosh; or if there is boring pain, rhus tox; if there is much scalding in urinating, never neglect apis melifica. If there is a bruised or broken bone feeling over the person, there is a strong demand for eupatorium perfoliatum; or a dull, drowsy condition, with enlarged pupils and disposed to stare at everything, use belladonna. A throbbing pain in any part of the body, gelsemium. But it must not be understood that I would recommend mixing all these remedies. Far from it! I would only prescribe them as indicated. I should not refer to this if I were writing or instructing Eclectics alone. The students of our Eclectic colleges can never pass the curriculum of a four-year course unless they are thoroughly acquainted with the positive indications and the positive specific remedy for each condition.

After the patient has sufficiently recovered from nephritic conditions, then strict care as to diet, etc., must be taken, using such foods that agree best with the patient. Never force food. I advise fresh sweet milk, fresh butter milk, fresh soft-boiled eggs, and such other light foods as are craved by stomach and easily digested. Never satisfy a morbid craving appetite. Eat slowly, masticate all food thoroughly, thereby aiding digestion from the start, as you already have an impaired constitution, and by so doing you will slowly and truly aid nature to re-establish the disturbed equilibrium, ever keeping a sharp watch on the liver, kidneys and bowels; otherwise the race will be short and death inevitable.

HOW TO CATCH A BAD COLD BY THE TEMPERATURE ROUTE.

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To do this scientifically and know just what one is about all of the time, it is essential to understand the temperature sense. This is a subsidary function of the sense of touch or pressure, the organ of which is the whole surface of the skin primarily, and secondarily the organs of touch. It is a faculty of the "skin-touch" sense and a discrimination between the temperatures of external substances. Not only the whole skin, but all mucous membranes, are endowed to a greater or less extent with this faculty, particularly the mouth, fauces, pharynx, gullet, and the whole nasal mucous membranes.

The serous membranes, particularly of the lungs, have a modified sense of temperature, but not of touch. There have been no separate organs described for this sense as yet. On the skin, however, there are places called "heat-spots" and "cold-spots." The cold spots are easily distinguished, if the point of a pencil be drawn slowly over the palm of the hand or over the face. This property of the skin has been thoroughly explored by Goldschneider, Blix and Donaldson. They found such spots to be numerously distributed over the surface, and permanent. Between these spots no temperature sensation can be excited. Mechanical and electrical irritation are also distinguished within these spots. Now, the exposed parts of the body are cooler than the covered, and are less sensitive to temperature waves, the covered parts having no opportunity to become accustomed to changes or hardened to such.

With comfortable surroundings we feel no difference in the temperature, although our hands and face are cooler than the covered parts. The interior of the body is necessarily warmer than the exterior. A standard for measurement is taken when the average surface is neither hot nor cold, and this is called "temperature-sensation-zero." Whenever a particular region has a temperature above its "sensation-zero," we feel warm, and when ever below, we feel just the reverse. The conductivity of the surface touched appreciably alters the temperature of the skin. Of two cold substances at the same temperature, a piece of metal and a piece of wood, the metal will feel the colder to the skin,

and produce a real cooling of the locality by its attempt to conduct the heat away. The acuteness of the temperature sense is greatest at 30 degrees C. or 86 degrees F., at which temperature the difference of 0.1 degree C. can be felt. The skin is unreliable as a temperature indicator, but exceedingly reliable as a cold catcher.

The normal heat of the skin is produced from within by the circulation of the blood, and is kept at a normal average by evaporation at the surface. The environment necessarily alters the surface temperature, which the blood pressure regulates under all nearly normal conditions. Rapid exercise will throw much blood to the skin, hence warm it largely. The pressure throws open the minute flood gates, then perspiration, evaporation and escape of heat will keep an equilibrium. If out in the open, exercising in the stirring air, evaporation is produced, pressure is kept normal and no inconvenience is felt. On the contrary, a sense of pleasure is realized. But if under these conditions one enters a house from a windy walk, or from a rapidly moving to a stationary section of air, an uncomfortable sensation is at once realized, a stuffy, oppressive closeness is suspected. On investigation it will be found to result from the quiet air of the room being unable to carry off the rapidly accumulating heat of the respirations, which cannot of themselves subside at once; hence the equilibrium is disturbed.

The throwing open of the doors and windows are now in order, that a draft may rapidly carry off all surplus heat. Now, a draft is endowed with intelligence and wisdom, and it also knows its specific business. When it has abstracted all of the surplus heat and moisture, down to equilibrium, it just then seems to double its energy and get all the heat there is left, because it needs it in its business. Now, under all ordinary circumstances a complimentary relationship of skin, lungs, kidneys and nasal mucous membranes exist. Each of these emunctories has its normal function. Each one will act in a vicarious manner and help the other out when necessary. But each one will take but a small part of another's work, or an extra job, and will do the work in its own way. There is no such thing here as the riding of a free horse to death. They will all go on a general strike first.

When this entity which we call temperature has abstracted more heat from the surface than the surface can afford to lose, then the end nerves of touch, who have charge of the pores

(flood gates), are thrown into confusion or temporarily paralyzed. This disturbance automatically rings an alarm at the central office, which immediately sends reinforcements in the shape of warm blood and energy to the seat of trouble. The gates are now quickly closed and locked, but a general alarm was sounded at central, and all available forces were at once dispatched to the surface, and, as nothing can escape, the gates being closed, a rebound occurs, and we call it a chill. Everybody may have gone to the front on the first call, leaving central almost or entirely deserted. The late comers are now tumbling over the ones in advance to see what the matter is; hence a big mix up and a general demoralization of the forces. This general misunderstanding causes friction, and a considerable degree of heat is evolved, which, not being able to escape, adds to the general confusion. This is technically called fever. If prolonged to any considerable extent, inflammation results, which is caused by the general demoralization and suffocation of cells. The next step would be death of the blood, suppuration, ulceration, necrosis. All of these stages are very rarely followed out, as the transportation of troops is fairly well provided for within the economy, and rapid mobilization can take place with comparative safety.

The nasal mucous membrane being exceedingly well supplied with blood, will necessarily feel sudden changes of temperature first; hence cold in the head is very common, and may be in all degrees, from the simplest passing congestion that is scarcely noticed to a profound case of neuralgia. For other purposes the nasal organ is provided with a set of nerves in the Schneiderian department which has motor functions, which by means of a sneeze assist in throwing off a cold, or at least of sounding an alarm at the first onset of such. But Schneiderian membrane is likely to become demoralized together with all the balance of the forces. Repeated and excessive attacks upon the delicate mucous lining of the nasal, or in fact any other mucous or serous membrane, will sooner or later permanently alter its function; hence chronic catarrh results, and this may occur in any part of the respiratory tract. If other departments are kept normal and an excessive amount of heat is abstracted for any length of time from the lung tissue, pneumonia, more or less severe and general, results, the etiology of which you know better than I can tell you.

Every part of the surface of the body is more or less susceptible to influences causing local congestions, and if near any large

or vital organ, that organ is usually drawn into the mix up, or its function may be deranged indirectly, from a reduction of its nutrition, by the deprivation of its normal supply of blood, that has been diverted to other regions.

If any organ or part of the system is below par from overwork, neglect or other cause, that part will necessarily be more vulnerable. The alimentary canal and its appendages are so arranged as to be fairly exempt from the general influence of unfavorable temperature. If, however, the stomach be out of order, from any cause whatever, or to any degree of heat, the bodily temperature is to that degree reduced, and to that degree predisposed to a cold. With its own numerous category of diseases and disturbances the stomach will indirectly influence the surface temperature. You are familiar with the fact that thin-blooded and weak individuals are susceptible to colds; and that one good "bad cold" will predispose another. Allowing any part of the surface to remain damp and cold for even a short time is a variety of the primary method for taking cold, and if this be the feet, the cold is very likely to become a general one.

A perfect model of good health is a great rarity. Most people have a weak spot some where, and if remote, this catching of a cold is one of the best ways of finding out where it is. A cold, like everything else, will seek the direction and locality of least resistance.

Remarks on these lines may be extended indefinitely; but I think with attention to the salient points of the above remarks, most any one will be enabled to catch a "good bad cold" at pleasure.

By carrying out this line of thought to its finer ramifications, every organ and tissue of the body may be more or less influenced by a "bad cold."

It will be noticed that the temperature route was chosen for this business on account of its being the cause of most, if not all kinds of colds.

SECTION OF SURGERY.

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THE X-RAY IN SURGERY.

G. W. BOSKOWITZ, M. D., NEW YORK CITY, N. Y.

As it is part of the duty of the chairman to give a review of the progress and advancement of the special work of his section, and as I do not want to appear negligent or unmindful of my duty as the presiding officer of this section, I shall ask your indulgence for a few moments. To review the advancement of the year in this important subject would take up the entire time alloted to this section. I shall simply refer to one of the great achievements, to my mind the most important, and one which has made steady progress during the year. I refer to the use and advantages of the X-ray in surgery. Its accidental discovery a few years ago is familiar to you all. Its practical benefits are becoming more numerous every day. The examinations of fractures by its means has opened up to us advantages and a positive knowledge not dreamed of a few years ago. The exact line of fracture can be seen, and therefore the proper means for its adjustment and retention adopted, whether by external splints, suturing, nailing, or by other means.

In the treatment of skin diseases, cutaneous cancer, lupus, etc., it has proved a decided step in advance of any other treatment.

I can best illustrate the results obtained by its use by reporting two cases:

Mrs. C., 78 years old, had been suffering from an ulcer on the side of her nose for ten years. It was not very painful,

discharged a thin, bloody serum, was slowly but positively spreading, and patient was in danger of its affecting her eye. She had been under treatment most of the time. It had been cauterized several times with but little relief. She had used ointments, antiseptic washes and powders, but to no avail. A slight change for the better for a short time with each change of treatment, and then it would return and discharge as before.

After the second treatment with the X-ray the discharge ceased and healthy granulations began to spring up, and in two months she was discharged. She was treated three times a week, having a ten-minute exposure, the tube being placed about eight inches from the face.

Mr. Roby, about 45 years of age, apparently in good health, looked well nourished and robust, gave the following history: About five years ago he noticed a roughness of his skin in the temporal region, with a slight itching. This continued for a few weeks, after which the skin became denuded and a slight oozing occurred and formed a crust. He consulted a doctor, who cauterized the spot and it healed, but after a few weeks broke out again. This continued to occur—heal after cauterizing and break out again. This continued for about two years, after which time that treatment failed to heal. When I saw him he had an irregular ulcer about the size of a silver half dollar, which had to be dressed several times a day and was quite painful. This condition was entirely healed in three months, and it is now six months since the case was discharged and no return of the difficulty.

These cases illustrate very well the advantages of this treatment. Many cases much more severe could be cited, but these answer for the illustration. I have some photographs here. If time permits, examine them. They illustrate better than any words of mine what the X-ray can do.

APPENDICITIS.

JOHN DILL ROBERTSON, M. D., CHICAGO, ILL.

Appendicitis is an inflammation of the vermiform appendix. It is almost always the primary lesion of all those conditions known as typhlitis, perityphlitis, paratyphlitis, etc., terms which are in most instances obsolete. They no longer imply pathological entities. A few observers many years ago recognized that such a disease existed. The majority of the profession, however, did not localize the inflammation. Appendicitis undoubtedly did exist at that time, as well as now, but was called inflammation of the bowels, or peritonitis.

In 1750 a case of perforative appendicitis was reported by Mesterier, of France. In 1827 Mellier described the disease, and named, among its symptoms, colic and fixed pain in the right iliac fossa. He was the first to advocate operations for cases where the diagnosis was thoroughly established.

The appendix is a diverticulum (musculo-membranous in structure) from the posterior and internal head of the colon. It has no known physiological function. The structure of the appendix is similar to that of the colon. It has a serous or peritoneal covering, a muscular coat and mucous coat.

The longitudinal muscle fibers which constitute the three white bands of the large intestine pass from the ascending colon down over the cecum. They come together at the appendix, and are continuous over it. When the cecum and colon are distended with fecal matter, these bands are put upon the stretch. It can readily be understood that this would cause a tightening or drawing together of the appendicular ends. The blood supply of the appendix is from branches of the mesenteric, and, in the female, ovarian. The blood vessels and lymphatics pass from the mucous tissue to the peritoneal covering through gaps in the muscular coat. In event of drawing upon the longitudinal fibers, these gaps are narrowed, and the structures which pass through them are pressed upon. This pressure may be so slight that it retards the flow but little, or it may be sufficient to entirely obstruct the circulation.

The seat of the most intense pain in appendicitis is usually at the posterior and internal part of the cecum. This corresponds

to a point on the surface two inches from the spine of the ilium, on a line drawn from the umbilicus to the anterior superior iliac spine, which is known as McBurney's point.

In the embryo, the appendix and cecum are represented by a straight tube. One end grows much more rapidly than the other, and becomes the cecum; the other does not grow fast (presumably on account of a poor circulation), and forms the appendix.

The relation of the appendix to the cecum is not always the same. Sometimes it is entirely posterior to the cecum, occasionally in front. In a very few cases it is external to the cecum. Sometimes its free extremity is pointed upward toward the spleen. Occasionally its tip is adhered to the gall bladder. If the ascending colon is displaced, it may be carried almost any place in the abdominal cavity. It is frequently found in an inguinal hernia sac. In inflammatory affections of its structure, it is more often found at the posterior and internal portion of the cecum than any other place.

It averages about four and one-half inches in length, and its diameter that of a lead pencil.

Appendicitis rarely occurs in infants. It is more frequent in young and middle-aged people than in the aged. Rarer in women than in men, because the female appendix receives an extra blood supply through the appendiculo-ovarian ligament.

Appendicitis is classed by most authors as a bacterial disease. They claim that occasionally it is produced by pus cocci, but most frequently by the action of the bacterium coli commune.

In the last decade the bacteriologists have isolated many bacteria, and stated that they were the cause of certain diseased conditions. Later, many of these have been proven to be harmless, and not the real etiological factors. That the tissues of our body, when in a normal healthy state, are not affected by the most of them is now known to be a fact. We must, in my opinion, look further for a cause for this trouble.

That the bacterium coli commune is always with us is known. That it is harmless to the normal tissue goes without saying. What is it, then, that puts the tissues of the appendix in a condition of inflammation? Why does not the cecum share in this inflammation, if it is purely bacterial?

The cause of appendicitis, in my opinion, can always be traced to an interference with the blood supply of the appendix. There are several things which will so cause an interference, but chief

among these is constipation. If the colon and cecum are so full of fecal matter that they cause the muscle bands to draw tight upon the appendix, the pressure which their action would cause upon the small blood vessels would retard or entirely obstruct the circulation. Concretions in the lumen of the appendix may cause direct pressure sufficient to interfere with the circulation. Nervous stimuli from a remote part of the body may cause a temporary spasm of these muscles sufficient to interfere with the circulation.

Nearly every case of appendicitis has for one of its prominent symptoms constipation, thus showing that constipation at least contributes to the condition.

A limitation of the blood to the mucous membrane, or a complete shutting-off of the supply, causes, first, a congestion, which may lead to a true inflammation, or gangrene. If the circulation is quickly re-established the trouble is short-lived, and resolution quickly occurs. We say our patient has an attack of catarrhal appendicitis. If this does not occur, the leucocytes pass into the tissues and infiltrate them. They come in contact with the bacteria, and a debris is left which we call pus. This may be confined to the appendix, or may pass through the walls and infect adjacent tissues.

The coil of small intestine lying next to the appendix becomes agglutinated to the cecum. The fixed cells proliferate and form a wall about the appendix. This occurs in a very few hours. About 20 per cent of these cases are suppurative.

There are many forms of appendicitis described, depending upon the stage to which it progresses. If limited to the mucous membrane, we call it catarrhal. If the lumen of the appendix is gradually and completely obstructed, it is called obstructive appendicitis. If infiltration of pus, it is called suppurative appendicitis. Gangrenous appendicitis, when the appendix is entirely deprived of its blood, and gangrene occurs. Perforative appendicitis when an ulcer has eaten through the wall. The difference depends upon the intensity and degree of the inflammation.

Symptoms: In the condition known as appendicitis colic, the patient suffers from disorders of digestion, and has short attacks of abdominal pain associated with trivial and temporary soreness over the appendix. This colicky pain is in the umbilical and right iliac regions; there is in many cases nausea, and invariably constipation. The symptoms of a true appendicular inflammation are as follows: For two or three days the patient does

not feel up to his standard. Constipation is very generally present, but in a few cases we have diarrhœa. There is a loss of appetite, flatulence, colicky pain about umbilicus, and later a heavy feeling, soreness or pain in the right iliac fossa. Nausea and vomiting usually occur. The tongue has a heavy, pasty coat. Examination reveals tenderness, fullness, rigidity of the muscles, and a marked pain in the right iliac fossa, especially marked immediately over the appendix. Temperature, as a rule, is moderate; pulse usually about 100, depending upon the patient and severity of attack. The symptoms at this stage may subside and patient recover, or they may become more and more aggravated. The pain may become so severe that it is almost impossible to relieve it. The sufferer lies upon his back and draws up the right leg to relieve the tension of the abdominal muscles. The pulse rate may increase; the temperature rise to 105 degrees; the abdominal distention and rigity become more marked. Vomiting begins and becomes persistent. The respiration is thoracic, quick and shallow. Great thirst accompanies the nausea. Eructation of gas and, in fatal cases, fecal vomiting. Great mental anxiety. Urine scanty and high-colored. Hiccoughs. If the inflammation continues for two or three days, swelling is often observed in the right iliac region, or is detected by rectal or vaginal bimanual examination. It is unwise to use force in making examinations. In acute appendicitis it may cause rupture.

In certain few isolated cases, where the appendix is large and the abdominal wall thin, it is possible to palpate the appendix. Coupled with the above symptoms, in case of rupture of the appendix, we may have general peritonitis and all its symptoms. It is not necessary, however, for the appendix to rupture in order to have general peritonitis. Pus may form, be limited by adhesions, and be practically extraperitoneal. In such a case a lump is felt in the right iliac region, and a dark discoloration or edema of the skin exists. In an abscess there is usually elevation of temperature and sweating. As soon as an abscess is present, the patient is in great danger every minute. If its wall should not hold it, and it should rupture into the general peritoneal cavity, general peritonitis invariably follows. Any manipulation or pressure of the abdominal wall may rupture it. Vomiting, hiccoughing, straining for the purpose of evacuating the bowels, high colonic flushings, great peristalsis of the small bowel, lying upon the left side, and, in fact, anything that would disturb the perfect quietude of the parts are to be avoided.

Termination: Appendicitis may terminate in complete recovery, in death, or in condition of lowered vitality in which the patient is subject to recurrent acute attacks until the appendix is obliterated. Adhesions invariably form as a result of appendicitis. Lymphangitis of the appendix may occur. Septic phlebitis and abscess of the liver or of the lungs may follow appendicitis.

Diagnosis: The diagnosis is not so easy or certain as we might assume from the wrjtings of many authors. At times we are called upon to differentiate from typhoid fever, gall stones with empyema of the gall bladder, pyosalpinx, cyst of the ovary or broad ligament, extrauterine pregnancy, movable kidney, or perinephric abscess.

Treatment: If the diagnosis could be made at the very onset of the trouble, before any of the surrounding tissues were affected, operation immediately performed would be the right thing to do. It would save the majority of fatal cases of appendicitis, and render the mortality very small. This plan cannot be followed in most of the cases. The physician cannot always be positive of the diagnosis early, and the surgeon sees the case after the physician. Even if they are diagnosed early enough, the patient and his friends have something to say in regard to operative procedure.

At the time the surgeon has, with the physicians, diagnosed the case and secured the consent of the patient and friends to an operation, it is manifestly much safer not to operate, but to wait until the leucocytes have built up a wall around the infection. Our medical treatment is here indicated, and I know of no school of physicians better capable of treating these cases that the Eclectic practitioner. Indeed, so well do they treat them, in most instances, that there is no necessity for the surgeon. *Vires vitales sustinete* is our watchword here. The vital force, the blood which contains it, is being sent in large quantities to the affected area. The leucocytes are migrating through the vessel walls. The fixed cells are proliferating, and nature is forming a barrier round about the appendix. The true physician should not hinder her, but anticipate her every intention or follow every manifested purpose. The knees should be propped up to relieve the pressure of the abdominal muscles. Hot applications should be applied to attract more blood to the area. In the beginning, quickly administer oil to soften and, if possible, remove accumulated feces. Use oil enemas and gently pass them as high up as the ileocecal valve. Failing to produce good movements in this manner,

strong drastic cathartics should not be given. They produce rapid peristalsis of the ileum, when it is desired that it shall be quiet. Do not give morphine for the pain, for any opiate interferes with the walling-off process. Depend on hot applications to relieve the pain. They should be of moist heat, and repeated every two or three minutes. Diet should be withheld. A very little water; no milk until after the bowels are moving.

Turpentine stupes, turpentine enemas and turpentine emulsion internally are useful for accumulation of gas. If it is found after three or four days that a swelling still exists, and the symptoms indicate pus, it should be evacuated.

The proper place to make the incision in this event is close to the spine and superior crest of the ilium. Cut through skin and facia down to muscle structure; part the fibers, if possible; failing in this, cut through them, and divide the muscle sheath down to the peritoneum. When the peritoneum is reached, follow with two fingers the peritoneum backward, dissecting it loose from the tissues external and behind it until the posterior internal portion of the cecum is reached. By careful feeling, a weak place in the abscess wall, posterior, can then be found and the finger pushed into the abscess. Go no further. Put in a rubber, about the size of the index finger, and leave for drainage. Do not irrigate. Do not explore with the finger. Do not hunt for the appendix. Allow the rubber tube to remain as long as pus discharges from it. After two or three days, gradually withdraw it, and in a week remove it entirely, and use gauze drainage until well. The appendix may slough out. If it does not, it will be obliterated, and the granulation tissue grown all about it.

If the swelling subsides without pus formation, advise an operation after all inflammatory symptoms have passed away. This is the so-called interval operation. The patient is prepared for a laparotomy in the usual manner. Every aseptic precaution is used. The incision is made directly over the appendix, at a point called McBurney's point. When the peritoneum is reached and incised, allow the fingers to follow the parietal peritoneum to the right, down to the ascending colon. When that is reached, feel for the longitudinal band and trace it down over the cecum into the appendix. If these directions are followed carefully, the appendix can easily be located. When it is, pack laparotomy sponges about it, and carefully break down any adhesions about it and free it from them. When it is loosened and brought up into the wound, take a small scalpel and circumcise the peritoneal

coat about one-fourth of an inch from the cecum; peel back this cuff; then ligate the appendix close to the cecum with fine catgut or silk. Remove the appendix, touch the stump with 95 per cent carbolic acid, dry carefully, and suture over it the cuff of peritoneum. Wipe out the cavity carefully and place cecum back in the cavity. Close the abdominal wall in the manner usual to all laparotomies.

I believe it is safer to operate after the first attack. The adhesions are not nearly so many nor so firm, and the patient is relieved of the danger of a second attack. All interval operations should be, and usually are, successful.

DISCUSSION.

Dr. Church, of Michigan: The subject of appendicitis interests us all. It is very frequent. I can remember well when we called these cases inflammation of the bowels, and one of the old physicians in my neighborhood treated these cases with active cathartics and enemas. They were generally unsuccessful in causing movements of the bowels, but successful in ending the lives of the patients. I had a number of cases, and knew no more than they, but my treatment was wholly different. My treatment of what was called obstruction or inflammation of the bowels was to put the patient on opiates. I did not move the bowels with enemas or anything. I simply controlled all peristalsis. I think the essayist is wise in advising no operation, and wait until you can open the abscess. I have opened a good many and never lost a case of that kind. When an abscess forms, nature has shut off the peritoneal cavity by adhesions, and you can easily approach the abscess in front, although the method given is undoubtedly satisfactory; but operation in front is without danger in my experience. I do not give anything by the stomach after a diagnosis of appendicitis is made. My first desire is to arrest peristalsis, which tends to increase inflammation. I would emphasize the point of giving no nourishment by the mouth, not even water or milk or any kind of fluid, simply because the least thing put in the stomach will excite peristalsis.

Dr. Standlee, St. Louis: I would like to emphasize one or two points: First, not to open the abdomen during the formative or inflammatory stage of appendicitis. These cases are usually the fatal ones, and only a complete obstruction of the bowel would make it a necessity to do an operation at this time. It is a very unfortunate thing for any patient with appendicitis to be

obliged to have the abdomen opened early in the disease. If operation can be delayed so as to allow an abscess to form, it can then be opened safely. If the abscess does not form, the patient is still in a safe condition. With regard to relieving the pain, while I agree that warm applications are proper, I have found a good large dose of gelsemium and 20 to 30 drops, lobelia, suspended in a large quantity of hot water, put into the bowel through a tube, to serve an excellent and satisfactory purpose. It will relieve the pain and irritability.

Dr. Clark, Chicago: I rise to offer my approval of a good deal that has been said. With regard to taking anything into the stomach, anything taken will keep up the pain. If you will withdraw the nourishment within 12 to 24 hours, the patient will be easy without any medicine whatever. The principle of operating in the middle of the attack is too well exploited to require notice. One should operate after nature has had an opportunity to produce this walling off process. And by the stopping of the perstalsis this walling off process is favored.

Dr. Jones, of Ohio: I frequently find it very difficult to determine when we have pus. Sometimes it is deep seated, and if neglected too long we are apt to have perforation, and result in general peritonitis. Sometimes we have no perceptible temperature. There is just a little œdematous condition, which will be observed by a very slight pit on pressure over the region of the appendix. It will be very slight, but it is a definite diagnostic point in determining whether we have pus.

Dr. Roland, of Iowa: It has been my lot to have a good deal of experience with appendicitis in my locality. I have not had to operate on any. I have used our treatment. I want to dwell on the treatment more. I use hot applications. My remedies are aconite, bryonia, gelsemium, dioscorea, and sometimes nux, just as indicated, and I have not lost any case yet. Sometimes I use opium to control the action of the bowel, and I use enemas in some cases. My neighboring physicians, whom Dr. Ellingwood says want to absorb us, operate as soon as they are sure of appendicitis, and 40 per cent of their cases are weeks in the hospital. They operate the first thing. They have got so crazy to operate that if they have a patient who has a pain in the stomach or bowels they say, "You have appendicitis and I will operate."

Dr. Delprat, Chicago: I wish to say that the pathology of appendicitis is beyond any symptom that we may have. It is

impossible, from the symptoms which we see in the average case, to know the pathology that exists. Among the remarks made, the one condition forgotten has been the mechanical formation, i. e., the appendicitis due to the action of the enterolith which causes perforation many times by mechanical action. It is a condition which should not be overlooked. The pathology is not represented by the symptoms. I will not say whether I agree as to the time of operation. A certain number of cases will die if you wait, and a certain number will die if you operate at once, but I wish to say for the credit of those who advocate early operation that I believe that if appendicitis had been operated on immediately it was diagnosed, regardless of the conditions, there would be thousands of people alive more than there are to-day.

Dr. Tucker, Chicago: Night before last a patient walked into Cook County Hospital, complaining of pain in the abdomen; was also vomiting a dark-colored substance. I was called to see him for a case of obstruction of the bowels. We put the patient on the table and decided it was undoubtedly appendicitis. As soon as we opened the abdomen a large quantity of sero-purulent fluid escaped, and we found a perforated appendix. I have seen cases where an enterolith remained in the appendix and it ulcerated through. The appendix was apparently normal in size, but it contained this enterolith, which had ulcerated through, and that was the condition found when we opened the abdomen. You will find it impossible to cure all these cases with medicine. There are cases that will not form an abscess. There will simply be some hardened substance in the appendix. If the patient is not operated upon he will die.

Dr. Harbert, Ohio: I seem to be alone in that I use cold applications, and find that they will control the pain, and I would like to know whether anybody else uses ice. I use the ice pack, and my cases have all recovered. I have not seen many.

Dr. Coffin, Indiana: Referring to the cold application, I have seen most excellent results follow the use of the ice pack in inflammatory conditions, not only in appendicitis, but other conditions. I would take the ice pack instead of water. You can use it without getting the clothing or bed wet, and keep the temperature down so the inflammation will subside.

Dr. Robertson, closing discussion: I have been much interested in this discussion. One of the points I wanted to take up is in reference to morphine. It may be safe in the hands of some people, but it is dangerous. You want, as Dr. Clark has said,

to keep the patient quiet and in as near normal condition as possible. Do not give any drug which will prevent the blood from going to the point and from forming adhesions. The cold applications I have used and recommended; but I think the hot applications are the best. They relax and they act as a counter-irritant, and that is what you need. The muscles form a band around the appendix, and when it is full it stretches them. Take out an appendix some day and see if you don't agree with me.

SURGERY OF THE STOMACH.

E. J. FARNUM, M. D., CHICAGO, ILL.

We are especially interested at this time in cases of injury of the stomach which demands surgical treatment.

Injury of the stomach by a blow, fall, or kick, if received immediately after a meal, and of sufficient force to rupture the organ, demands a surgical operation. Penetrating wounds made by a sharp instrument, or gunshot wounds, involving the stomach, require surgical treatment.

Wounds of the stomach are generally characterized by excessive pain in the epigastrium, with nausea, and extreme prostration. Vomiting of blood is an indication that the wall of the stomach has been penetrated, while bile, mucous, and ingesta may be mixed with the blood.

Injury of the stomach may be complicated with injury of the lungs, bowels, kidneys and other viscera; and the hemorrhage may be excessive. A penetrating wound of the stomach inflicted during the empty state is not so serious as in other cases, and the wound may heal without surgical intervention. Wounds of the stomach, however, are always grave. Surgical treatment, too, has not been attended with the success which might have been expected.

Military surgeons are agreed as to the futility, and even danger, of operating in case of gunshot wounds of the stomach and other viscera. A few recoveries from gunshot wounds of the stomach have been recorded by several observers, both in civil and military practice. If the wound is small and situated in the lesser curvature of the organ, and inflicted when the viscera is empty, the conditions are favorable for recovery.

The practice of operating for injury involving the stomach

has come into vogue quite recently, while in chronic diseases operative treatment has been established for years and the surgical technique clearly outlined.

A patient receiving an injury in which there results a rupture of the stomach wall, or a penetrating wound involving the stomach, will exhibit a train of symptoms sufficiently pronounced to indicate the nature of the lesion. Pain, vomiting, with the vomit often streaked with blood, are the primary symptoms which show that the stomach wall is involved in the injury.

Hemorrhage indicated by such symptoms as acute anæmia, small, rapid pulse, cold, clammy perspiration, dilated pupils, yawning, vomiting, syncope and convulsions, demand surgical intervention without delay, for the purpose of preventing death from hemorrhage by the direct treatment of the visceral injury causing it.

The subsequent symptoms, or those which arise some time after the injury, are from peritonitis. In these cases there is a tendency to the formation of pus.

As a rule, a patient suffering from rupture of the stomach, or a penetrating wound of the stomach, especially if it be a gunshot wound, will exhibit marked symptoms of shock.

The treatment at first should be directed to overcoming the shock. Hypodermic stimulation is often demanded, but morphine in large doses to relieve pain is contraindicated, as it has a tendency to depress the vital force.

The propriety of interference in wounds of the stomach will depend on the condition of the patient. If he is pulseless and dying, an operation is not warranted. Those cases most likely to demand immediate operation are those in which the vascular organs of the abdomen—the liver, spleen, omentum, or larger vessels—are injured.

In a case of injury of the stomach, with vomiting, much can be done to assist the patient to evacuate it by means of the stomach tube. If the stomach is thoroughly evacuated and washed out with normal salt solution, it is possible for the patient to recover from a small penetrating wound without operation. Stomach washing should always be resorted to in any case of injury of that viscus.

Enough time should be allowed to elapse before resorting to operative intervention to determine the condition of the patient. If the symptoms of shock continue for a period of from two to six hours after the receipt of the injury, no time should be lost,

and an operation to repair the injury that has been done should be performed at once.

In any case we should prepare the patient for an operation. Having washed out the stomach with the syphon tube and normal salt solution, the rectum and colon should also be emptied by a free use of salt water injections.

If the patient is much prostrated, whisky two ounces to four ounces of warm water may be given per rectum. One-thirtieth of a grain of strychnine can be given if needed. Throughout the treatment, external dry heat must be employed to overcome shock. The abdomen must be thoroughly disinfected.

The probe should not be employed, as it increases the danger of infection, and no reliable information can be obtained in this way. The wound, however, may be enlarged by means of the knife and groved director. There must be at hand, compresses, towels, and several gallons of warm normal salt solution. The hands of the operator, and everything that is to come in contact with the patient, must be made aseptic by sterilization. The patient being moved to a suitable place, anæsthesia may be induced, using chloroform and continuing with ether.

The opening to reach the stomach is usually made in the median line, the incision extending from the ensiform cartilage to the umbilicus. When the wound in the stomach is found, it should be clamped, or held by the fingers of an assistant, to prevent extravasation. Any of the contents which may have escaped should be carefully wiped away with hot lap sponges.

In order to discover wounds of the stomach, the organ may be brought into the abdominal incision, and its anterior surface carefully examined. Usually a small amount of clotted blood will be found adhered to the stomach and peritoneal tissues at the side of the wound. There is usually no difficulty in locating and repairing a wound in the anterior wall of the stomach, unless the patient's abdomen is covered with a thick layer of fat.

If it was a bullet that caused the wound, which has also penetrated the posterior wall of the stomach, it will be necessary to open the lesser peritoneal cavity in order to examine that part of the viscus. This is done by dividing the tissues of the omentum between the greater curvature of the stomach and the transverse colon. After the opening is made between the ligatures in the omentum, the posterior wall can be grasped by the fingers and drawn through the opening so that the entire surface can be examined.

The wound being found, it is repaired with fine aseptic silk, using a common sewing needle and making one row of Lambert's sutures, bringing the serous surfaces together, the sutures including the sero-muscular structures. The sutures should be introduced, wherever possible, in the direction of the blood vessels.

In case of profuse hemorrhage, it is often difficult, after opening the abdomen, to find its source. When the blood accumulates as fast as it is sponged away, pressure should be made by an assistant on the abdominal aorta, by introducing his hand through the abdominal incision and pressing below the diaphragm.

If the hemorrhage is from a wound in the kidney, a lumbar incision must be made to allow of its removal, and the parietal peritoneum sutured so as to separate the peritoneal cavity from the wounded kidney. When the injury of the kidney is severe, nephrectomy may be necessary.

Wounds should be sutured with fine silk, and when the hemorrhage does not admit of sutures, as in wounds of the spleen, liver, or other viscera, large compresses of gauze should be packed into the wound, each of which should have a long strip attached, which is allowed to hang out of the external wound to facilitate removal. When catch forceps are employed, and left attached for twenty-four hours, a strip of gauze should be attached to each to make their removal certain.

An important question is the proper method of cleansing the peritoneal cavity and removing any material that may have been extravasated through the wound in the stomach.

If the operation be performed soon after the injury has been received, and before peritonitis has set in, it will usually answer to wipe the cavity clean and dry with lap sponges, wet in a hot normal salt solution. If there has been much extravasation, and peritonitis has set in, then it becomes necessary to thoroughly irrigate the cavity with normal salt solution, which cleanses and stimulates at the same time. If extravasation has been extensive, it is best to irrigate, but if slight, it may be wiped away with sterile gauze.

The question of drainage is an important one. It is reasonable to suppose that a certain amount of infectious material necessarily remains in the peritoneal cavity. When there is reason to believe that the peritoneal cavity has been infected, drainage is demanded. In cases where irrigation has been employed, drainage should be established.

The best results follow when a strip of sterile gauze is placed in contact with the peritoneal tissues that have been injured, one end being allowed to hang out of the abdominal wound. This may be allowed to remain for several days, being packed into the wound in such manner as to allow of its being gradually withdrawn from day to day. This cheesecloth drainage is a safeguard, since if peritonitis should set in, access to the peritoneal cavity is facilitated, and the case can be managed with much better results than would be possible after the abdominal wound is completely closed. The incision is closed in the usual manner.

Absolute rest is demanded and must be strictly enforced. If the patient cannot be quiet he will die. Stimulants to overcome shock may be given hypodermically, and nourishment per rectum for the first week until the wounds in the stomach have healed sufficiently.

DISCUSSION.

Dr. Wiley, Iowa: I would like to ask the essayist why he prefers a silk suture to absorbent suture. I am certain he has a good reason, and would ask if he ever was troubled with these stitches.

Dr. Farnum: The stitches usually used to close an opening in the stomach are fine silk, that has been thoroughly boiled, instead of silk worm gut. The silk lasts well and, so far as my experience goes, does not produce any difficulty after the operation. A catgut, which is easily absorbed, does not hold the peritoneal attachments sufficiently firm. It gives a little and is liable to be a source of irritation. In some cases it gives way before the connection of the tissues is sufficiently firm from repair.

OCCLUSION OF THE ŒSOPHAGUS.

Dr. Farnum: While we are on this subject of surgery, I would like to report a case, if permitted. I feel so elated over the result of a case that I would like to tell about it. I have learned more about this case since I came to this meeting. About eight months ago one of our doctors, who is present to-day, had an experience with a patient, a little over three years of age, who drank a portion of caustic potash. Produced a very severe burn of the mouth, œsophagus and stomach. For some time after the accident occurred the patient suffered with all the inflammatory conditions that follow such an accident and the healing process was established. An attempt was made to retain the passage in

the œsophagus by the passage of bougies from time to time to retain the opening. After three or four months' treatment, the best that could be instituted, the œsophagus became closed completely, and the patient was on the verge of starvation, and had been fed per rectum for a considerable time. The child was brought to the hospital in this desperate condition for treatment. After administering an anesthetic, we endeavored to pass an instrument into the stomach by the œsophagus. The injury had been such that pockets had formed along the œsophagus and often passed into the tissue around the œsophagus. Murmurs could be heard in the lung tissue along either side of the spinal column.

We decided to attempt to reach the constricted tissue through an opening in the stomach and gastronomy. An incision was made in the median line, the stomach drawn into the opening and an opening made in the stomach. Several different kinds and different sizes of instruments were introduced through this opening toward the cardiac end of the stomach to try to gain access to the œsophagus. After trying in the same manner that most any of us would try to pass a urethral stricture that caused retention of the urine, it seemed we would be met with failure.

We decided to force the issue, and did so until we thought perhaps we had gotten into the mediastinal tissues and failed to carry it through the œsophagus, so I could not really tell whether we had succeeded or not. The gastrotomy was completed by suturing the stomach, forming a fistula through which we could nourish the patient until we could do something further. The method was like Frank's operation for a valve-shaped opening, drawing the stomach through the peritoneum and muscle, and then drawing it aside through the subcutaneous tissue and out through the border of cartilage and stitch to the skin. This was pursued with satisfactory results. A medium-sized soft rubber male catheter was used to feed the patient, by passing malted milk, bovinine, etc., into the stomach every four hours. This opening did not leak during the process of digestion, which is surprising. The great difficulty we have is that as soon as the patient changes position, or digestion commences, the food runs out over the abdomen. We succeeded in getting a perfect fistula which would retain the food in the stomach. It is now four months since the operation, and the doctor to-day tells me that his patient is fat through this method of feeding. He is in good health, running about and playing as any child, and that he is able to drink water. We have not allowed him to take food or attempt to pass any-

thing through the œsophagus. There is still inflammation along the œsophagus, and he thinks small abscesses form and break. The hope is in this case that in time the suppuration along the œsophagus will cease. It is so deep-seated that it cannot be reached by operative treatment, but it is hoped that in time it will heal so we can again introduce the bougies. We now have a passage, which we could not determine we had prior to the operation of gastrotomy. The operation seems to be perfectly satisfactory and successful as far as we have gone.

Dr. McCann, Indiana: I had the pleasure of being in Chicago and seeing the patient the doctor speaks of, and the mother was so proud of it that she wanted to open the dressing and show me how they were feeding the baby, and the nurse fed the child while I was there. It would say after the feeding, "Well, I am not hungry any more." It seemed to me one of the most satisfactory cases, so far as it had gone at that time, considering the amount of inflammation, that I had ever witnessed.

Dr. Robertson, Chicago: I have been very much interested in the case reported. In this connection I wish to speak of an operation upon the pyloric end of the stomach. An old Bohemian lady, about 60 years of age, very much emaciated, came to the Cook County Hospital several years ago with cancer of the pyloric end of the stomach. There did not seem much question of diagnosis, because of the presence of the cachexia. Manipulation caused her to vomit. We decided to operate. We cut down and removed the lower end of the stomach and the end of the pyloris and fastened the two ends together with the Murphy button. The thirteenth or fourteenth day she began to vomit. This continued twenty-four hours, and as we could not stop it, we decided to see what was the trouble. The button had not passed, and we supposed it had dropped into the stomach. We drew the stomach up and hunted for the button, and it was not there. We searched along the intestine, but could not find it. The patient was put to bed, and seven or eight days later the Murphy button passed. The reason I speak of this is on account of the stitches. The silk stitches were used in this case. When we cut down the second time we could see no trace of the stitches. They were completely encysted. She got up and went home, and did not die until one year after, when she had a recurrence of the trouble.

Dr. Standlee, St. Louis: I was very much pleased with the result that Prof. Farnham mentioned in this œsophagus abscess

from swallowing a caustic. A case came under my observance. A little child swallowed concentrated lie. My brother responded to the call, which was made in my absence, and attempted to relieve the immediate distress by giving such remedies as were at hand, but in the next few months the child looked like one of these little mummified marasmus infants. It was distressing to look at. At frequent intervals he would throw up blood and mucus, and every particle of food or water that went into the stomach would be ejected before it went to the stomach or vomited after it went into it. It would retain scarcely anything. We wondered if it would not be feasible to feed it some other way. We finally succeeded by rectal flushing in producing some improvement, and in the course of a long time it gradually got well; but I am inclined to think that the best treatment would have been to perform a gastrotomy, and the result Dr. Farnham has given confirms me in that belief. I believe rest by feeding in another way is essential above all things.

Dr. Rice, Texas: The case Dr. Standlee reports reminds me of a case I had last July, in which a child of about three years had been playing where the mother was washing. She had put a box of concentrated lye in the forks of a tree, and it had fallen on the ground, and the child picked it up and swallowed some of it, how much we never could tell. The first thing the mother noticed was the screams of the child. My office was about 400 yards from the place of the accident. When I got there the lips were horribly swollen—you never saw a negro's lips thicker. The lower lip was swollen and extended to the chin, and the upper to the nose. The tongue had become enlarged, and so far as we could see the throat was burned. I had a mixture I keep for similar cases of burn or scald—a saturated solution of boracic acid, with cinnamon, eucalpytol and menthol. I immediately gave it a teaspoonful, repeating every fifteen minutes for four hours. Ordered a teaspoonful given after I left as often as every hour through the night. This occurred about three o'clock in the afternoon. I wet a piece of cloth, as much as I could conveniently get into the child's mouth, and had it held in its mouth. Nothing else was done. As marvelous as it seems, that child's lips became normal. It seems incredible, but such is a fact.

DISEASES AND INJURIES OF THE CRANIAL BONES.

E. Lee Standlee, M. D., St. Louis, Mo.

In the discussion of this subject let us enter for a few moments into the anatomy of the parts involved. Eight bones, occipital, frontal, two parietal, two temporal, sphenoid, and ethmoid, are so articulated by amphiarthordial, or fixed joints, as to form a general cavity for the reception and protection of the encephalon or brain. This cavity is subdivided into three fossæ, designated anterior, middle, and posterior, receiving these respective lobes of the brain. The frontal bone forms a great part of the orbital cavity for the reception of the eye, and the greater part of the organs of hearing are located within the temporals.

The longest diameter of the skull is usually antero-posterior, and the greatest convexity is in the frontal and occipital regions, which together with the increased thickness of the bones at these points produces a condition of great strength and one which will repel considerable violence without serious injury. The vertex is protected in like manner, but hardly to the same extent. The lateral aspects are flattened, and even concave in the temporal fossæ, bones thin and compact, and while somewhat protected by the thick temporal muscle and its aponeurosis, yet withal quite vulnerable.

The base of the skull is thoroughly perforated by foramina, fissures, fossæ, and openings of various kinds for entrance and emergence of vessels and nerves. It is protected somewhat by the articulation with the spinal column and the thick structures forming the neck, but is frequently the seat of disease or injury from transmitted force or violence.

Wounds of the cranial bones are mainly incised and punctured, and all wounds of these bones fall into two general classes of penetrating and non-penetrating, the former involving the entire thickness of the bone, while the latter does not enter the cranial cavity.

In non-penetrating wounds, contusions only of the cranial bones may result, the prognosis of which, if uncomplicated, is favorable, but if there is a compound condition, or if in subjects of poor general health, scrofulous or tubercular, inflammation, suppuration, osteo-myelitis breaking down of both tables of bone,

resulting in meningitis, thrombosis, and finally pyemia, and septicemia. To illustrate:

A young man received a blow upon the right frontal eminence, apparently causing little disturbance, and promptly recovered. In the course of one year the point, which had been a little tender, became swollen, with increased tenderness, accompanied by severe frontal pains. Upon application to the family physician, local general treatment proved only palliative. Patient refused to allow the part incised. Finally abscess formed, and opened above supra-orbital arch, and was kept cleansed with antiseptic solutions. Later a second opening occurred below the arch, and both were treated in like manner, but failed to heal. After several months of this treatment the patient consented to an operation. An incision from the first opening to the point of the original injury disclosed the frontal bone, soft and carious, extending over an area of about two inches in diameter and including both tables of bone, which with a bone scoop I carefully removed, leaving the meninges over the frontal lobe of the cerebrum uncovered and unbroken. The wound was cleansed and packed antiseptically, resulting in a prompt recovery.

In penetrating wounds of the skull, infection is the usual result, with compression of the brain from depressed bone or hemorrhage. The earlier these symptoms are met by the indicated treatment the more likely a fully satisfactory result. Wound must be cleansed and thoroughly antisepticised, all foreign matter, bone spiculæ, and blood clots, removed, and the depressed bones elevated.

Where an incised wound is caused by a sharp instrument, it is not so likely to produce depression or shattering of the bones, but the hemorrhage is usually more severe. Force applied, as by a fall or blunt instrument, produces great concussion, and greater area of mutilation if sufficiently severe to overcome the elasticity of the cranial bones. A comminuted fracture may occur at the point where the force is applied, or a compression or bursting fracture may occur elsewhere, or the so-called contre-coup upon the opposite side. Either or all of these may prove serious in accordance with the amount of injury done to the brain, its coverings or blood vessels. The middle meningeal artery and its branches, or one or more of the fifteen sinuses, usually furnish the more dangerous hemorrhage.

Large amounts of cranial bone may be sacrificed without

serious injury, if the complications are not extensive, as the following cases will illustrate:

About eight o'clock in the evening a large lump of coal, falling from a car, struck a girl of ten years upon the top of the head, depressing the frontal and parietal bones at the junction of the sagittal and coronal sutures, over a space two and one-half inches in diameter. The scalp was cut triangularly, but the hemorrhage was easily controlled by a compress and bandage, so the child was placed in bed for the night, and I was telephoned to come in the morning. Upon arrival I cleansed the wound, shaved the scalp, and removed the depressed bone; found the inversion of the bones at the sagittal suture had cut the dura mater over the superior longitudinal sinus, but not entirely through. The scalp was sutured and dressed, and the patient was out the next day, and remained up each day during convalescence. Healing took place without suppuration.

A man thirty years of age received a blow over the right supra-orbital arch and frontal eminence, which was inflicted by a scale weight thrown by an adversary. The entire right side of the frontal bone was "caved in" and remained depressed. I saw the patient six hours after the injury, and found him in a fairly conscious condition, able to converse reasonably well. Blood was still oozing from the wound, which had been dressed by a local physician with compress and bandage to await my arrival.

The patient was placed upon the table, and after thorough cleansing the external wound was slightly enlarged and the bones elevated and removed. The meninges were unruptured, and the frontal lobe of the brain came immediately to its place, and showing a normal pulsation the wound was closed and united by first intention. The patient showed no further symptoms, and made an uninterrupted convalescence.

A boy of nine years was found in a stable in an unconscious condition. He was removed to his home, near by, and was found to be breathing. The family physician made an examination and found the left posterior half of the occiput depressed, with points corresponding to the nail heads in a horse's shoe cut through the scalp. These being insufficient to allow the escape of blood, a large hematoma had formed, separating the periosteum from the depressed bones over the injured area. The left femur was broken in the middle third and the left tibia and fibula at the junction of the middle with the upper thirds, the latter being also compound. I saw the patient one hour after the injury. It

seemed a poor risk, but I said to the doctor, we will at least give him a chance. The head was given first attention by cutting the nail marks into one long incision, and turning the flap over the wound was well exposed. After cleansing from spots, etc., the bones were elevated, seven in number, appearing as per cut. The lower bone shows a part of the groove for the lateral sinus. The meninges were cut in several places, the most extensive being near the location of the sinus, and from which flowed a large stream of veinous blood. This was tightly packed with gauze, which controlled the hemorrhage, the upper part of the wound stitched, and the entire head well bandaged. The fractures of the limb were then adjusted and placed in a temporary dressing to await the result of the cranial injury. Patient revived under hypodermic stimulation in the course of twelve hours, and labored considerably under delirium for five days, after which time consciousness returned, vision became normal, and an uneventful recovery took place, with the exception that the femur was extended under an anæsthetic to prevent shortening of the leg, and which finally recovered with a slight quarter of an inch shortening.

Fractures of the base of the skull, with the exception of gunshot wounds, are usually caused by indirect violence. These as described by some authors are produced by a process of irradiation, yet the mechanism seems to indicate that their production is either by compression or bursting. If by compression, the line will fall transverse to the direction of the force applied, while in bursting the line will run comparatively parallel with the same. If the force is applied through the vertex or spinal column, as by a fall on the top of the head, or upon the feet, or in the sitting position, the line may take a circular direction around the foramen magnum, affecting the weaker points of the bones.

If the skull had a uniform thickness and power of resistance, fissures could be reckoned out mathematically. This, however, is not the case, but stronger and weaker portions alternate, both in the vertex and base, and also the great number of openings in the base for the soft tissues exaggerates this condition here, therefore it is impossible to calculate the exact direction a fissure will take. However, it is quite safe to reckon that in compression fracture the line will fall at right angles to the direction of the force applied, while in a bursting fracture the

line will run parallel with the force applied. The following case may serve to illustrate:

Mr. W., a well developed man of 30 years, received an unexpected blow upon the right temple from a man standing behind him. The implement used was the closed fist or some smooth body held in the hand. No external cut or even severe bruise was evident upon examination, but the bone was fractured, and immediate unconsciousness ensued. The patient was removed to his home, and later to the hospital, where I examined him and operated sixty-seven hours after the injury, disclosing a comminuted fracture of the squamous portion of the temporal and inferior part of the parietal. No depressed bone, but large amounts of blood clot from the broken branches of the middle meningeal artery.

Following the operation consciousness returned, so that conversation was indulged in for about three hours, when the patient again lapsed into coma, which lasted until death, which occurred about twelve hours later. At the autopsy it was discovered that a fracture had occurred upon the opposite side of the head, extending from near the vertex to the petro-occipital suture at the base. Considerable blood clot was present at intervals along the line of the fracture and also at the base. In this case the usual signs of fracture of the base were absent, such as bloody serous discharge from the ears, eyes and nose.

MOVABLE KIDNEY.

HENRY SCHMITZ, M. D., CHICAGO, ILL.

A movable, floating, wandering, or migrating kidney is a kidney that is wholly displaced from its normal situation, and may be found in the abdominal cavity, the iliac fossa, or even the true pelvis. The kidney under these circumstances possesses such a degree of movability or mobility that it can readily be moved to and fro in the abdominal cavity.

The causes of movable kidney are: 1, a change in body form brought about by external or internal influences; 2, certain abnormal constitutional conditions; 3, traumatism.

A change in body form through external influences is brought about by pressure through tight lacing, the wearing of constricting bands, and the like. This causes an undue pressure

on the abdominal organs. The liver is pushed down. This in turn causes a gradual displacement of the right kidney downward, and the first stage in the establishing of a movable kidney is reached. On the other hand, the readily yielding soft stomach does not press on the left kidney; it does not tend to displace it. Hence the frequency of right movable kidney; hence the frequent occurrence of this displacement in women. Movable kidneys are more frequently caused by this one change in body form than by any other cause known.

The kidney is forcibly displaced by internal influences, as an enlarged liver, an enlarged spleen, a deformity of the vertebral column, as in kyphosis, etc.

Constitutional derangements causing a movable kidney are a chronic cough or chronic constipation, causing a persistent expulsive effort, the diaphragm thereby pressing on the kidneys, especially the right one, constantly.

Whether emaciation causes movable kidney is doubtful, as this condition may be the result of lowered vitality attendant upon floating kidney. Traumatism, as a severe fall or a blow upon the loin, may cause movable kidney if a predisposition to this condition existed.

Symptoms: Many persons possess a movable kidney without suspecting the fact. The movable kidney can be detected with especial ease if, with the patient standing erect, lifting one leg upon a chair to relax the abdominal muscles on the corresponding side of the body, bimanual palpation of the kidney is practiced and deep inspirations are encouraged at the same time. If the kidney is a movable one, i. e., movable to the degree mentioned before, it can be pushed from the pelvis up into its right place, the kidney readily dropping down again on removal of the support of the hands. Under these circumstances it is an easy matter to outline the form of the kidney and even feel the pulsation of the renal artery in the hilus of the kidney.

The subjective symptoms are nervousness, painful drawing sensations in the abdominal cavity or loin, gastric disorders, as loss of appetite, eructations, vomiting. It is to be remembered that in women, symptoms referrable to a movable kidney are very often aggravated at the menstrual period. Many patients even suffer from dysmenorrhœa. If incarceration of the movable kidney occurs with occlusion of the ureter, we get a train of symptoms designated as paroxysmal hydronephrosis. The patient complains of a severe pain in the location of the wandering kid-

ney; the organ is extremely sensitive to the touch; the kidney is greatly increased in size, the urine diminished in amount due to urinary stasis; there is acute dilatation of the pelvis of the kidney; there is fever and vomiting. On correcting the position of the kidney by bimanual palpation, the occlusion of the ureter ceases, the urine passes on into the bladder, the amount of urine passed being for some time after increased.

Considering the fact that fixation of the kidney through an operative interference alone promises a permanent cure of this condition, and as the technique of the operation is simple, and as nephrorrhapy is not a dangerous operation, it becomes our absolute duty to recommend and perform a fixation of the kidney as soon as the diagnosis is made. It is not necessary to relate the preparations for this operation, hence I will give an outline only of the technique.

A muscle splitting incision is made, beginning a little in front of the tip of the twelfth rib, extending downward, forward and inward in the line of the fibers of the external oblique muscle. These are separated bluntly, and the fibers of the internal oblique and transversalis, which cross the line of incision almost at right angles, are separated in the same manner. The peritoneum is carried inward and the perirenal space entered. All the perirenal fat is removed, but the perirenal facia is carefully preserved. The kidney is pushed up into its normal space, and a forceps is applied to the renal capsule to hold the kidney. Three chromocized catgut sutures are introduced through the muscles on one side, carried through the capsule of the kidney and out through the muscular layers on the other side. Strips of iodoform gauze are now packed into "Geratta's space," a space bounded by the prerenal and retrorenal fascia underneath the kidney, to cause or favor the formation of adhesions. The catgut sutures are tied and the skin incision is closed by a continuous horsehair suture. After applying dressing and bandage the patient is put to bed. The gauze is removed on the third day, the superficial horsehair sutures on the eighth day, and the patient is allowed to be up and around the twenty-first day.

Dr. Standlee: What position do you prefer in the detection of the movable kidney?

Answer: The erect position, with the leg lifted on a chair to relax the muscles.

DISCUSSION.

Dr. Cannon: The diagnosis of floating kidney in some instances is very easy. In other instances I know of no derangement that puts one so to the test as diagnosis of floating kidney. Recently I had a patient brought to me with a true floating kidney. The kidney was small, the left kidney, midway between the superior spine and the umbilicus, a most difficult thing to diagnose. I did not believe it was floating kidney until I made the incision, when I found this small, contracted kidney. I did nothing with it, because it was outside the peritoneal cavity. I closed up the wound and let it go. I do not operate for fixation of the kidney in the manner given by the essayist. I use the sling operation, not sutures. Have been using it for three or four years. (Illustrated with a handkerchief in hand to show how this is tied.) The kidney drawn out of the wound (illustrates), with four pieces of iodoform gauze to keep the ends from slipping, and the wound closed, just giving room enough for these tips of gauze. These are left in position, the wound closed and dressed antiseptically and patient put to bed. Leave ten days, when ends are withdrawn. Since using this operation I have not seen a case of recurrence. With the stitch operation there are frequent recurrences.

Dr. Schmitz: That is the reason I pack the space with iodoform gauze, in order to cause adhesions. It seems to be sufficient to cause adhesions between the kidney. It may lead to derangement in the blood flow. I leave the kidney alone as much as possible.

GASTRO-ENTEROSTOMY.

H. S. TUCKER, M. D., CHICAGO, ILL.

The operation of forming a union between the walls of the stomach and a loop of the intestine is performed in cases where stenosis or closure of the pyloris is caused by carcinoma or where a permanent stricture exists from any other cause. Stricture of the pyloris may be operated upon by doing a pylorectomy if the stricture is non-malignant, and in some cases where cancer exists this operation can be performed and the cancerous mass removed.

In all cases of stricture, the trouble has existed so long before the disease has been detected or properly diagnosed that we find

the stomach greatly dilated on account of the stenosis. If the case is sent to you for examination and you find that the patient has been suffering pain in the region of the stomach, has been vomiting contents of the stomach every two or three days, and is greatly emaciated from the want of proper assimilation of food, and upon examination you find the stomach occupying a position much lower than its natural one, you can feel quite positive that you have a case of stenosis due to cancer or thickening of the walls of the pyloris so that very little food can pass through and the patient is gradually starving to death.

The operation for the relief of this condition, called gastro enterostomy, consists in joining a loop of the jejunum to the wall of the stomach near the great curvature. The patient is prepared in the usual manner, it being impossible to get much if any action from a cathartic. The stomach is washed out just previous to the operation; also a colonic flushing should be given to empty the bowels of any contents that may be retained there. The abdomen should be prepared in the usual manner for a laparotomy, that is, first shaved and scrubbed with a brush and soap and water, then alcohol, followed by a five per cent carbolic acid solution, this followed by bichloride solution and sterile water.

An incision is now made in the median line above the umbilicus and the small intestine brought forward to the great curvature of the stomach and joined to the upper part of the jejunum. To determine the direction or course of this intestine a grain of salt should be applied to the surface of it, which will excite a muscular wave or contraction, the wave passing upward toward the pyloric end, where the gut is joined to the stomach. This end should be toward the right, so as to avoid twisting it.

The intestine may be brought up over the transverse colon and the gut brought up through this opening behind the colon to the great curvature of the stomach. The intestine and border of the stomach are now brought through the opening in the abdominal wall and laid on a sponge, the parts being protected by warm gauze sponges. Be sure that you have a loop of the intestine turned in the right direction and the first loop below the duodenum. A loop of the ilium attached to the stomach would not be of much benefit. The free border of the intestine is now stitched to the stomach close to the great curvature to the extent of about three inches with pyoctanin catgut or fine silk. Silk is preferable. An intestinal clamp is now applied to the gut on each side of the point to be opened, and the incision is

made in the intestine along the free border about one-fourth or one-third of an inch from the line of stitching. An incision is made into the stomach the same length as that in the intestine, which is about two and one-half inches, and the same distance from the point where the intestine is stitched to the stomach. The two edges of these openings are now stitched together with catgut all the way around so as to make a complete closure of the opening from the abdominal coating, but leaving a large free opening from the stomach into the intestine. The second row of sutures is now introduced, commencing at the point where the intestine was first stitched to the stomach and extending all the way around to the other end of this stitching. This makes two rows of sutures uniting the intestine to the stomach. The outer row is a Lembert suture, and fine silk is used for the stitching. The abdominal wound is closed in the usual manner, by first sewing up the peritoneum with fine catgut and the sheath of the muscles also closed with fine catgut. The external opening is closed with silk worm gut.

I have operated upon three cases, one of these for cancer of the pylorus and the other two a stenosis due to an inflammatory condition and ulceration at the pyloric end of the stomach. Of these three cases one recovered, one case lived about three days, the other case about four weeks. This last case was in such an emaciated condition that it seemed impossible for him to recuperate under any kind of stimulation and feeding after the wound in the stomach had completely united. Death in one case that I had under observation was due to an overdose of morphine. I believe that about 50 per cent of the cases operated upon by this method will have their lives prolonged, and may live for a number of years if the case is not malignant.

One case I had died from an overdose of morphine. He had been in the habit of taking the drug to relieve the pain, and at the time of the operation I was obliged to continue the drug to relieve the craving for it. He recovered from the operation all right, but six weeks afterwards they gave him an overdose of morphine and he died inside of an hour.

ONE OF THE PITFALLS OF SURGERY.

WM. B. CHURCH, M. D., NILES, MICHIGAN.

There is much in the daily life of a surgeon to gratify his highest ambition and satisfy a natural desire to be useful to his fellow man.

The responsibilities are fully commensurate. Disaster sometimes follows in his wake from which neither skill, judgment nor wise forethought may always save him. Praise and blame depend not upon his efforts, but upon the results secured.

Nature has safeguarded the citadel of life with infinite pains. Everything indicates that human life, although its span is brief, is considered the greatest of all earthly treasures.

"Life, which all creatures love and strive to keep. Wonderful, dear, and pleasant unto each, even to the meanest."

The poet Longfellow wrote:

"Life hath quicksands, life hath snares."

The greatest of all poets, in *Measure for Measure,* gives vivid expression to the universal estimate placed on life in these lines:

"The weariest and most loathed worldly life
That age, ache, penury, and imprisonment
Can lay on nature, is a paradise
To what we fear of death."

Milton personifies Death as "The Grisly Terror," and Byron apostrophizes—

"O God! it is a fearful thing
To see the human soul take wing
In any shape, in any mood."

It is a momentous thing, therefore, to enter upon a career where one's acts involve the issues of life and death as do those of the surgeon. The responsibilities are so tremendous he must not only expect to be held to the strictest accountability, but he must be prepared for the bitterest denunciation and hatred when he has done all that human skill can do. Success and nothing but success in every case is the only condition upon which he may expect to be tolerated.

It follows, therefore, that everything that menaces the success of his work must possess for the surgeon great interest and

importance. The special menace which it is the purpose of this paper to consider arises from the fact that thrombi formed in the crural or other pelvic vein may be carried in the blood current into the right heart and fragments of it driven thence may become emboli of the pulmonary arteries. If such thrombus is of moderate size, the fragments may be driven into the lungs, producing præcordial distress, pain, and dyspnœa with rapid pulse. If an embolus is detached large enough to occlude a pulmonary artery, these symptoms are all intensified. The patient sits up in bed, gasping in anguish, with a sense of suffocation and impending dissolution. The pain shoots through the chest and side, and is felt with crushing severity under the shoulder blades. A clammy perspiration breaks out, the mind wanders, the pulse flickers with extreme frequency and feebleness, and death may ensue without further warning.

You all know that sudden death sometimes occurs in this way in childbirth. From some cause the uterus fails to contract promptly as the placenta is detached, the open mouths of the placental veins in the uterine wall may receive clots which are swept along the stream to the heart and cause sudden death. In some cases the thrombus finds secure lodgment in the femoral vein, in which case there is obstruction with phlebitis, so-called "milk leg." In still other cases emboli, not too large, pass through the pulmonary arteries into the lungs, causing dyspnœa, cough, hemoptysis, pain and præcordial distress, terminating after a week or ten days sometimes in gradual convalescence, and sometimes fatally. Fortunately, fatal embolism in connection with childbirth is rare; but it occurs often enough to invest the puerperal condition with more or less vague fear in the popular mind as involving the possibility of a sudden mysterious ending of life.

Death from causes under consideration are much more frequent in abortion. The abortionist may follow his foul business for a long time with comparative impunity, so far as sudden death is concerned, but we are all familiar with the fact that his victim occasionally dies with appalling suddenness. More than one such case occurred in San Francisco while I was there. At least one case must be credited to Michigan in the recent past. The moral is that death from embolism is not more frequent in this connection. The conditions especially predispose to it.

Hemorrhage: A flow is the object aimed at by the first manipulations. This is produced; a portion passes off, and a por-

tion retained in the uterine cavity and coagulates. As there are no further developments, the abortionist endeavors to make sure by another and more violent assault, attempting especially to rupture the placental union. A sudden gush of blood from the vagina is almost immediately followed by ominous silence. The wretch suddenly realizes that he has a corpse in his office and that it will be troublesome to account for. The subsequent investigation may be sufficient for practical purposes, but will not be ideally complete unless the post-mortem reveals the condition of the pulmonary arteries. It is, however, more especially the embolism after operations on the bladder and prostate, and also after our frequent gynecological operations.

I therefore venture to report an unfortunate case of my own in illustration. Last summer I returned from a prolonged stay in California for a visit to my old home in Michigan. While at Marshall I assisted a local physician in several cases of surgery, with incidental consequences to myself which may have come to the notice of some of you.

Among other cases was one of uterine carcinoma, for which we did a vaginal hysterectomy. Nothing out of the ordinary characterized the operation, except the unusual vascular condition encountered. A silk ligature broke in ligating the vessels of the left broad ligament and there was some trouble in securing and religating, but not more than is usual in such cases. The operation lasted about an hour, when the patient was put to bed in fairly good condition, with every prospect of a favorable outcome. The case progressed satisfactorily. On the morning of the fifth day she was cheerful and comfortable, with normal temperature. Her husband was so much encouraged that he went for the day to his farm, several miles in the country.

Before noon the nurse hastily summoned me, being alarmed by the sudden quickening of the pulse, with sharp pain in the præcordium, and distressing dyspnœa. The face was drawn and anxious and very pale, becoming cyanotic, and covered with cold perspiration. The symptoms were so plainly pathognomonic of pulmonary embolism I had painful forebodings of what the result must be. I sent at once for the husband, fearing lest he should not return in time to find her alive. I was sadly conscious at the same time how futile would be any attempt to make the friends comprehend the nature of the accident which had wrought the disastrous change. How much more readily they would lend their ears to unfriendly outside suggestions. Up to this time

the attitude of all concerned had been grateful and most friendly, but now an accident for which no one was responsible, one that has repeatedly foiled the work of the best surgeons, reversed the whole situation, and produced a complete revulsion of feeling, changing warm friends to bitter enemies.

Although death seemed imminent, it transpired there was still some passage for the blood, and the patient lingered with these symptoms for three days before the fatal termination. Air entered the lungs freely, there were no pulmonary physical signs, yet there was intense dyspnœa. The predominant feature was the weak, irregular heart action, and the small, empty, radial pulse. The mind was clear at first, but later became clouded and wandering. There was also an elevation of temperature for a few hours, soon subsiding to normal. No post-mortem was had, but there can be no doubt from the symptoms that death was due to plugging of the pulmonary arteries with emboli derived from vessels in the field of operation. As already intimated, these words, and the condition they imply, were alike incomprehensible to the good people with whom I had to do. Deaf to every other consideration, they were moved to grief and anger by their great loss, and soon instituted a suit for malpractice. This was made easy by the readiness of the law officers, and not at all discouraged by one or two medical men who could not forego an opportunity to air their opinions in a matter attracting wide public attention. As a whole, however, I acquit the physicians of the locality of any disposition to act unfairly. They are, as a body, educated gentlemen.

Although fully confident the charge could not be sustained, and naturally desirous to vindicate myself, I felt compelled to forego the satisfaction because of the great expense it would involve. A verdict in my favor would hardly compensate me for the outlay indispensable to a defense in the courts. Dr. Maynard, of Paw Paw, some years ago impoverished himself, spending over four thousand dollars, in successfully defending a malpractice suit. Many surgeons have expended much larger sums. On account of the liability to be made defendant in such suits, many surgeons keep no property in their own names, and some, for the same reason, do not operate until a contract has been signed that no prosecution shall be indulged in, whatever the result of the operation may be. In this instance I resorted to such devices as the law provides to delay proceedings. Whether such a course is wise or otherwise I leave others to decide.

Within the year the New York County Medical Association has taken measures for the defense of its members against malpractice suits, employing a lawyer by the year. Doubtless such action will have some effect in deterring pettifoggers from working up such practice. The primary motive instigating the bringing of these suits is to evade payment of the fee. The physician or surgeon attacked will in most cases prefer to compromise, even when he knows that he has only done what is right. He is influenced by the feeling that litigation is necessarily expensive, and often ruinous. So he foregoes collection of a just debt, and often yields up a considerable sum besides, even when certain that a verdict could not be obtained against him. The love of money being next to the love of life itself, no easy way of securing it is likely to be long neglected. So every suit compromised breeds other blackmailing schemes. Consequently malpractice suits are rapidly increasing. This seems, therefore, a clear case for association to assume a duty which is too much for the individual. In another way this is done in New York. The Fidelity and Casualty Company insure against suits for malpractice. A premium of ten dollars a year protects from damages up to $2,500.00. It is said to be doing a good business.

The liability to pulmonary embolism following pelvic surgery seems to have only recently received much attention. In none of the works on gynecology accessible by me is there any reference to it except Kelley's.

Since writing the foregoing, however, my attention has been called to an article in *The New York Medical Journal* for April 5th, contributed by E. S. Keyes, Jr., entitled "Pulmonary Embolism After Operations Upon the Bladder and Prostate."

Both writers refer to the same German surgeons to whom I infer we are indebted for the first clear exposition of the pathological condition.

These Germans, with characteristic thoroughness and patience, made repeated careful post-mortems, establishing the causal relation of thrombosis of the pelvic and crural veins to pulmonary embolism. Mahler reports twenty-two cases and Wyder nine cases.

Following these, and referring to them, our foremost gynecologist, Howard A. Kelley, treats of it in the eleventh volume of his "Operative Gynecology." In this great work we learn that numerous cases have been observed and carefully studied post-mortem. I quote from page 132: "Death from embolism has

occurred after myomotomy, removal of the tubes and ovaries for myoma, hystero-myomectomy, the extirpation of a carcinomatous uterus, exploratory incision for carcinoma, ovariotomy, vultrofixation of the retroflexed movable uterus, and curettage of the cancerous cervix." In another paragraph below he adds: "The occurrence of such a frightful accident, even after so simple an operation as a ventro-fixation, teaches anew the important lesson that the surgeon is never warranted in guaranteeing the recovery of the patient, even after a seemingly simple operation." He furthermore says: "There is no treatment for the severe cases." The utmost care should be exercised, therefore, to secure prophylaxis. Any condition producing increased vascularity is especially liable to embolism. Consequently, myoma operations, and those for malignant disease of the uterus, are the ones most frequently followed by thrombi.

In men, pulmonary embolism frequently follows operations for appendicitis, enlarged prostate, and bladder troubles. Sudden death following amputations of the lower limbs, usually ascribed to shock, is in many cases produced in the same manner. Surgical shock is a kind of ready-made explanation too often resorted to. It will have a more limited role in the surgery of the future.

Hysterectomies, for carcinoma especially, where it is often necessary to divide the broad ligament as far as possible from the uterus, should be done by the abdominal rather than the vaginal route, and all large vessels ligated before section. In all pelvic operations, with extensive inflammatory adhesions, the opening should be large enough to enable the operator to use his eyes as well as hands, the Freudelenberg position affording the greatest facilities, and all bleeding points properly secured. In any case œdema, with rapid pulse and respiration, will suggest possible thrombosis, and prompt us to refuse, or at least postpone, operation.

If a thrombus is lodged in the femoral vein, with resulting phlebitis, and œdema of the limb, the limb should be carefully bandaged, and complete rest maintained in bed until the clot is absorbed. If much blood has been lost in an operation, a subcutaneous saline infusion will diminish the danger of thrombi. It will be seen that sepsis is not the only thing to be dreaded in surgery. However, as all sources of danger are better understood, more and more efficient measures will be devised to meet them.

OPERATION FOR GALL STONES.

JOHN PERRINS, M. D., BOSTON, MASS.

I feel that I cannot treat the subject in any better manner than by reporting a most peculiar and interesting case that recently came under my personal observation.

On the 9th day of March, 1902, I was called in consultation with Dr. Holden, of Melrose, Mass., to see a Mrs. P., of that city. Mrs. P. is the wife of an old friend of mine, a Unitarian minister. She is 52 years of age, and has five children, four of whom are grown up.

I found the patient suffering severe paroxysmal pain in the region of the stomach; her features were drawn as if in great agony and the skin was of a dark yellowish-brown color. I learned that these attacks had first been noticed when she was about 18 years of age and had tormented her more or less up to the time I was called. She informed me that she suffered so much pain all the time that she was tired of complaining and only did so when the pain became intolerable. After making an examination my diagnosis was gall stones. Thereupon the patient exclaimed: "That is what all the doctors have said upon first seeing me; but it is not so, for I have had these attacks for many years, and by the direction of several doctors the fæces have been examined time and time again, but no gall stones have ever been found."

Notwithstanding this statement I still adhered to my statement that it was a case of gall stones, and the attending physician, Dr. Holden, was of the same opinion.

Within a week the patient's husband called on me and reported that his wife had suffered a still more severe attack, that Dr. Holden was of the opinion that an operation was necessary, and that unless performed very soon he feared that the consequences would be very serious if not fatal. Upon further consultation I concurred in this opinion; an operation was decided upon, and I was requested to assume the management of the case.

As soon as possible I consulted Dr. Maurice H. Richardson, of Boston, who is regarded as the best authority in such cases, as well as the best operator, and arranged to have the patient taken to his house the next day for examination. At the time appointed I met the patient, her husband and daughter.

After a most thorough examination, Dr. Richardson made this statement: "I find the gall bladder very much enlarged; in all probability it is filled with gall stones," and it was then decided to convey the patient to a private hospital for operation.

On Tuesday, March 17th, at the Vincent Memorial Hospital, 44 Chamber street, Boston, the operation was made. The gall bladder was found to be literally packed with gall stones. These were removed and the gall bladder washed out. A further examination revealed the fact that the ductus communis was hard, very irregular in shape and much enlarged. Dr. Richardson called my attention to this by an exclamation of surprise. Being the only means of reaching the interior, an incision was made through the wall of the duct, the edges of the wound secured by a series of sutures and the contents, which proved to be gall stones, were removed.

The stones removed were washed and counted; there were one hundred and fifty, ranging in size from one-half to five-eighths of an inch in diameter to the size of a small pea. There were between forty and fifty of the larger size and the balance ranged to about the size I have stated.

A glass tube, to which was attached a long rubber pipe, was inserted in the gall bladder and secured, and the end of the rubber pipe was inserted in a receiving vessel. Through this drainage tube a large quantity of bile flowed. In from two to three weeks very little bile was found in the feces; after that the feces became dark in color, and it was thought that the tube could be withdrawn and the incision in the gall bladder be allowed to heal, when suddenly the feces assumed a clay color, indicating that the bile was not flowing through the proper channel. The glass tube was again inserted in the gall bladder and large quantities of bile began to flow through it. An examination revealed the fact that the duct was again filled with small stones in size not unlike grains of sand. After repeated efforts these small stones were picked out or washed through, and again the bile had a free passage. This was followed by the appearance from time to time of many stones, some as large as the largest that were first found. This condition continued for several weeks; some stones were found each day until about the tenth week, when a whole week passed without a single stone making its appearance. The patient at this time seemed to be doing well, improving every day, when suddenly a new feature developed. A sudden and severe vomiting came on, accompanied by a most intense

sour or acid condition in the mouth. This continued for three days and nights, during which time the patient could not take food, or, if taken, it was immediately rejected, and she was fed by enema. She was so reduced in strength that it was feared she would not survive, but after this period she again improved, and more gall stones were removed.

It was difficult at first to account for these strange manifestations, but it was finally concluded that by some unknown means the pancreatic juice had found its way into the gall bladder or stomach, or both.

One week after these symptoms had disappeared I saw the patient, and was so well satisfied that she was through the worst of the ordeal that I wrote an encouraging letter to her husband; but still up to that time stones were making their appearance and being taken out, and indeed that very day one of the largest of all had been removed, but it was much softer than those at first found.

Up to the present time there have been removed (exclusive of the one hundred and fifty or more that were removed at the time of the operation) upward of two hundred stones by actual count, beside all the debris that was from time to time washed through the duct.

This case seems to open up new features in the subject of gall stones. The question naturally suggests itself, where were those two hundred and more stones when the gall bladder and gall duct were absolutely free from them, as they certainly were at the completion of the operation?

There seems to be no solution possible other than that they were imbedded in the liver.

About nine days ago I found the patient sitting up in bed writing letters. She was able to dress and walk about her room several hours a day, and the indications were she would soon be able to return home, cured.

I visited her again on Wednesday, June 4th, and to my surprise found her in a serious condition. I learned that the day following my previous visit, which was on Wednesday, May 28th, she had suffered another attack similar to the previous one. The intense vomiting, with the souring, had continued for six days, but was then subsiding. There had been no more gall stones. She now takes her food regularly, digests it well, and is rapidly recovering.

HOUSEMAID'S KNEE.

H. HUGH HELBING, M. D., ST. LOUIS, MO.

The location of bursæ mucosæ are most frequently over the patella, though they may be located over any bony prominence or connected with tendons. Bursæ are situated in the subcutaneous cellular tissue and are formed of cellular membrane. The cells being finally obliterated, leaves a cavity lined with a membrane that secretes a serum and resembles serous membrane. This process is occasioned by friction or pressure, and being more prevalent among those who do housework, it is denominated housemaid's knee.

The contents of these bursæ may vary in character, at first being nothing more than transparent serum, but gradually acquiring more the nature of synovial fluid. There may be hemorrhages into the sac at times; this blood may undergo organization, resulting in fibrinous deposits. These growths are found to be of different sizes, varying from that of an egg up to six or eight inches in diameter, depending upon the length of time the growth has existed. Occasionally a bursæ will become inflamed and end in suppuration.

A negress, aged 42, had suffered with this growth for many years. It was so large and tender that she was disabled. The growth was about as large in circumference as the leg itself, measuring sixteen inches. There was an opening from which exuded pus and serum. I operated by taking out a portion of the wall of the sac. In opening up the cavity I found the contents to be organized fibrinous deposits, coagulated blood and serum. The contents were a chocolate color and filled a wash basin. After curetting the open wound, it was closed with a continuous catgut suture, leaving gauze in the lower end of the wound for drainage. It healed readily, and a perfect recovery was accomplished.

Another case was of the simple variety, and I merely report it in order that I may explain the injection treatment. This bursa was the size of an orange. I introduced a medium size needle, after rendering it aseptic, and as the serum would not flow out, I attached my asperating syringe and drew out the fluid,

after which, leaving the needle in situ, I injected one ounce of the following:

℞

Sp. thuja.
Glycerine .....aa ℥ ss

After injecting the medicament, a bandage was applied, with instructions to loosen it if necessary. Severe inflammation ensued, and by the following day the pain was almost unbearable, but by applying heat this was controlled, and by the end of a week the patient was practically well. The strength of this solution may vary. Of course the stronger the solution the more severe will be the inflammation.

MODERN METHODS IN ANATOMICAL STUDY.

E. LEE STANDLEE, M. D., ST. LOUIS, MO.

I want to introduce into our colleges the idea of cross-section work, which is being done a good deal now, as those who have had work in anatomy understand. I think it an excellent way of improving upon the work we can accomplish in anatomy.

The distance from the skin to a given portion of the body is not easily determined by the character of work ordinarily done. When you cross-section a body you can put it in a more natural position and more readily determine the relationship of the organs as well as the depths of the tissues you will pass in determining the locations of the organs of the body.

In the study of anatomy it is necessary for us to hold up a body or a part of a body and look through it just as though it were transparent, in our mind's eye. In the teaching of anatomy I find it necessary to get the students to recognize this condition. It is impossible to teach a student anatomy by routine work and have him retain it with any considerable degree of advantage. He cannot commit it. He must systematize, and get so he can shut his eyes and look through the body and tell the depth of the tissues to become a practical anatomist, and this can be done with very little trouble. With all the lectures and dialect work on this line, you will find that for the true source of information on this line it is necessary to go back to nature. That is the only way we can get the true estimate of knowledge. You will find when you look into the subject a certain authority will say it is one way, and when you get into the body you find it is not that way. The ordinary process we have used for years of course has done a great deal, and until recently was the means of illustrating the different parts of the body so that we thoroughly understood them. We now add to this cross-section work, and you may pass it obliquely or transversely, as the case may be. The present methods of preservation are so much superior to the former methods that a body of this kind can be prepared and cut into sections and kept as long as you want. Photograph each section and describe it, and by this process the student will be so thoroughly impressed that he cannot possibly overlook or forget.

This body which I present is only fairly well prepared, and yet I have had it in my possession since March. It has not been subjected to antiseptic solutions externally, and yet it is in a perfect state of preservation, and there will be no trouble in preserving it as long as I desire. I use formaldehyde, which is commonly used for that purpose. You add 50 per cent of water and you have a 50 per cent formaline solution, and yet you have only a 20 per cent formaldehyde solution. About a pint was injected into the umbilical cord through a small tube and ordinary syringe. The boys in injecting it were not careful to see that the head was filled, and therefore it presents a dark appearance. It was a stillborn child, and it was preserved in that condition. If the head had been well filled, the brain would have remained as it was. Coat with vaselin and wrap in a cloth and it will not dry.

You can, by taking a colored solution, inject into the organs and color them. That makes it prettier. Color the arteries with red lead, and in this manner you can color the vessels thoroughly.

For an adult you require from one to one and one-half gallons. You can take a little body like this and let it dry and it will mummify.

You will be surprised what an advantage this will give your students in anatomy. It will give the depth at which you are going to work in a better way than is possible by other methods, and possesses many advantages. You can with this method of teaching make an anatomist of a student that will stick. He may otherwise learn enough to do ordinary work, but unless he keeps at it, it will get away from him; but if you give it to him in this way he will be an anatomist as long as he practices medicine.

Inject with color, and you will be surprised what a beautiful showing it will make. This was prepared about the first of March. It is not affected by the hot weather. You can keep it all summer where it is ordinarily cool. With formaline you can keep a body a year, and with other solutions you can do as well, but when you open it and begin to work on it, it will not keep so well as this will.

Question: Do you keep adult bodies in the same way?

Answer: I have kept a few of them. They preserve very well. The alcohol, carbolic acid and glycerine make the best solution for dissecting material. If you will submerge it in any

weak antiseptic solution you will get a better result, although you can wrap it and keep it dry.

DISCUSSION.

Dr. Robertson: Two weeks ago I was invited over to Dr. Eckert's room in Chicago. He had some specimens which he preserved in this way and had used the coloring matter as Dr. Standlee speaks of, and they were very pretty indeed. I do not believe there is a better way of studying anatomy. It does us good to think about and talk about. The idea of getting the locality of the different organs in the body is of great importance.

Question: Do you not have difficulty in cutting through the bones in an adult?

Answer: You may take a butcher knife and a saw to cut through the bones.

When the body is opened there is frequently an excessive amount of fluid. This must be gotten rid of, and in order to do that, when you make your sections, have some strips of dry cloth, and as you make a section put the strips of cloth in them, and when you pull them out they will have taken the moisture up, and the sawdust from the bones will also adhere to the cloth.

Question: How long after the injection is it before dissection may be done?

Answer: This was two months. Three weeks is an abundance of time; twelve to fourteen days if you wish. But if you leave the body a while you can make a little better job.

SECTION OF GYNECOLOGY.

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FIBROID TUMORS OF THE UTERUS.

A. L. CLARK, A. M., M. D., ELGIN, ILL.

Fibroid tumors of the uterus are of unknown frequency. They are unknown because in perhaps a majority of cases their symptoms, and the inconveniences caused by them, are so slight that their possessor lives and carries them, or what may remain of them, to her grave without a suspicion of their presence.

But unfortunately they are not always so harmless. From the mild-mannered tumor which causes its possessor not the slightest inconvenience or disquietude, there are all gradations of severity up to those which seriously threaten if even they are not the direct cause of the loss of life. When, then, in a gynecological examination an entirely unexpected uterine fibroid is found, absolutely innocent of causing any discomfort, it may almost become a question whether to announce its presence and cause a perhaps nervous patient years of mental worry, or let it take the course of hundreds of others, and go "unwept, unhonored and unsung," and unworried about to its end. Should, however, another gynecologist be called upon to make an examination, and report the existence of a tumor, the reputation of the first might be compromised, as the patient and her friends would hardly be likely to understand and appreciate the motives which in his case caused him to withhold the announcement of such a discovery.

Numerous theories have been advanced as to their causation. In reality almost nothing is known. Common as they are among

the white race, they are yet more common among colored women, so much so that it has been asserted that it was the rule rather than the exception that every colored woman between the ages of 25 and 45 is the host of a fibroid tumor. If there be any truth in this statement, and there certainly is some, the general harmless nature of the difficulty will be evident to each one of us when he reflects how few comparitively of the deaths of negresses of which he has known have been from this cause.

As to prognosis, authorities differ, some saying that with the arrival of the menopause they will inevitably decrease and disappear, others, diametrically the opposite, asserting that the menopause has little if any effect upon them, and that extirpation by hysterectomy is the only treatment. Concerning this proposition an English writer has recently said that the facility with which the abdominal cavity can now be opened, and the perfection of the technique, has enormously decreased the death rate from ovarian tumors and increased that from uterine fibroids.

We can all agree with the first part of the statement; of the statistics I have not a sufficient knowledge to be able to express an opinion as to the second part, but I do really feel that there may be some just ground for the statement. Dazzled by the unquestioned benefits and brilliant successes attendant upon many surgical operations, there is danger that some may recommend and practice surgery when a wise conservatism would give better results. Abdominal hysterectomy, which is the only remedy offered by some, and in many cases may be the only available operation, is a procedure of such gravity, especially with the complications which may beset it in fibroid cases, that it should not be recommended except with wise and due consideration. What the books say we can all read for ourselves; there is therefore little reason why I should further allude to them, but it will be more profitable if my own experience be given instead.

Uterine fibroids exist under three principal conditions: Subperitoneal, growing upon the exterior of the uterus; intra-mural, as the name implies, within the uterine walls or imbedded in its muscular substance; and sub-mucous, growing from the interior of the uterus.

The inconvenience and danger are usually gauged by which of these classes the tumor falls under. If of the first or subperitoneal variety, the tumor may grow quite rapidly to a large size, surrounded as it is by the yielding abdominal walls and the intestines, and its enlargement is usually accompanied by little

pain or annoyance until it encroaches too extensively upon neighboring structures.

The second or intra-mural form is generally productive of very little trouble, and pressed upon as it is by the muscular walls of the uterus, it is limited in size. It is this form especially that may exist for years without the knowledge or suspicion of the patient.

The third variety soon makes itself known by vascular disturbances of the mucous lining of the uterus, at first a discharge of often unpleasant odor, with tinges of blood, leads perhaps to a suspicion of some malignant growth. Later increased menstrual flow is succeeded by inter-menstrual hemorrhages, often of quite serious character. The treatment is medicinal and expectant and surgical. In the first form all special medicines should be poured into the sewer or some equally insensitive place where they can do no harm, rather than into the stomach of the patient, where they can do absolutely no good and probably will do harm. In the second form, the growth being surrounded by muscular substance, may be largely influenced by the muscular contractions produced by the ergot of rye, and especially of corn. At times, however, even here no beneficial effect will be noted. A good lot of expectancy in the lapse of time should be invested in. Very few, almost none, of these tumors will prove serious.

The third form is but little amenable to medicinal treatment. In an almost infinitesimal percentage of cases the uterine muscle may force the encapsuled tumor through the uterine mucous membrane, and in this way it may be expelled, either in a natural or calcified state. The danger in this form lies in hemorrhages which may become very prostrating and be a sufficient warrant for direct intervention.

Any of these forms may undergo fatty degeneration and be absorbed; they may become calcified; they may take on a malignant termination, and the first form may become cystic either as a fibro-cyst or cystic outgrowth. My own experience has been that with the menopause, whether natural or artificial, further advance in size is stopped and a progressive diminution in size takes place, an atrophy so extensive and complete in many cases that all trace of the tumor is lost.

In this way I have seen a fibroid reaching above the umbilicus, and presenting the appearance of a seven months' pregnancy, completely disappear in a year or two after the cessation of menstruation. So long as no serious inconvenience is caused,

it is safe if not best to abstain from any surgical interference, especially as a large tumor is quite as easily removed, usually easier, than a small one.

Some of the indications demanding surgical interference are:

1st. The growth of the tumor down into the pelvis, by its size and pressure causing mechanical stoppage of the rectum, and inability at times to retain urine; all this accompanied by increasing pelvic uneasiness and pain.

2nd. Hemorrhages increasing from month to month and becoming nearly continuous and seriously debilitating.

3rd. Cystic degeneration in any form.

4th. The probable occurrence of a malignant termination, an event not too easily determined, and which in some cases it may be allowable to assume.

5th. Such increase in size as by pressure upon contiguous viscera to cause serious inconvenience if not danger.

Most of these conditions may be somewhat modified by the probable near approach of the menopause, which will very likely be unduly delayed and prolonged, but which, as I have heretofore stated, in my experience has been followed by a cessation of all active symptoms and an atrophy of the growth. Believing as I did that with the cessation of menstruation further troubles would be stopped, at various times within the past twenty years I have removed the ovaries, and in every case the result has been all that could be desired. In two cases of serious hemorrhage it was immediately stopped and the patients restored to good health. In several cases, however, the ovaries have been completely covered in and occluded by the growth, leaving no choice but to make a complete hysterectomy.

From the favorable experience I have had with such cases I am inclined to advise removal of the ovaries where practicable, but would always be prepared with the understanding and consent of the patient and friends, as well as in instrumental preparation, to complete the operation by a hysterectomy if found necessary when the abdomen was opened. I would not recommend or advise a routine hysterectomy, because it is by quite a little a more serious and dangerous operation than oophorectomy. Of the two evils choose the least.

A brief summary of the above facts concerning uterine fibroids may be made as follows:

1st. Uterine fibroids are very common.

2nd. They are seldom fatal, though often productive of considerable discomfort.

3rd. Medical treatment is seldom of any avail.

4th. The menopause, natural or artificial, usually brings relief.

5th. Surgical treatment by removal of the ovaries, or the yet more radical hysterectomy, is under certain circumstances necessary, but should be resorted to only after careful consideration. There is some evidence that in the past surgical treatment has increased rather than diminished the fatality of uterine fibroids.

DISCUSSION.

Dr. Shafer: The paper is an excellent one, and the reason I rise is to say that the doctor has failed to say anything about the treatment by electricity. My experience with these cases is that there are three kinds. The subperitoneal I don't believe we can do anything with but use the knife, but in the others I think electricity is a useful remedy. I have never had the courage to puncture the fibroid when the tumor is superitoneal; but where submucous I preferably use the bipolar galvanic current. The first case I treated in that way was a remarkable case to me. She had been treated medicinally and had been advised that nothing but the knife would relieve her. She would not use the knife and said there was no use using medicines any longer, of which I was satisfied. There was only one thing left, and that was the use of the galvanic current. I made a digital examination, and found the cavity entirely filled. The cervix was of a stony hardness. From the history it must have been of five years' standing. She said her stools were like shavings as they passed from the carpenter's plane. It was utterly impossible for her to tell when the bladder was distended with urine and also impossible to tell when empty. The only thing she could do was to have a stated time she would go to the closet and try to void the urine. The only way she could tell when through was to examine with her hand. I began my treatment by using the galvanic current, passing the electrode for about one-fourth inch inside the cervix. I gave a treatment of six minutes, 20 milliamperes, placing the large electrode over the abdomen. Gave her treatment every third day, and gradually worked my way up, using the negative current intra-uterine, or rather intra-cervix. It was utterly impossible to pass the smallest sound into the womb. I finally softened up the cervix, and I am glad to say

the woman is entirely well, by the use of the galvanic current. I have used it in a number of cases. I never use the current as strong as some advocate; never over 60 milliampers, and the average is 40, and the treatment lasts ten to fifteen minutes. If a hemorrhage occurs I use the positive pole intra-uterine and the negative over the abdomen. If there is much pain in the back over the small of the back, I pass the current in that way, always following the galvanic current with the primary faradic current. It relieves the pain. I have never succeeded in getting them to lie down after the treatment. I tell them to lie down for twelve hours, but never succeeded in getting them to do that.

Dr. Standlee: If no member present cares to discuss this paper, upon observing that Prof. Clark has taken the same subject I had, I will alter the title of mine a little and give my paper under the discussion of his, "Uterine Myo-Fibroma Complicated with Pregnancy."

UTERINE MYO-FIBROMA COMPLICATED WITH PREGNANCY.

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Prof. Clark has given us a very excellent outline of uterine myo-fibroma, both subperitoneal and submucous. In the discussion of the subject of uterine myo-fibroma complicated with pregnancy we have a difficulty which seldom occurs, and yet when it does occur it is certainly a problem for any man who may be unfortunate enough to have a case of this kind fall into his hands. The tumor occupying the superior part of the uterus may be sufficiently out of the way, if not too large, to allow the gestation to proceed to full term with no particular difficulty. The uterine wall will then contract and expell its contents, and no serious trouble may result. If, however, the position of this tumor is in other segments of the uterus, the middle or inferior for instance, you have at once a very grave difficulty should conception take place. If it be in the middle segment, the conception will scarcely proceed to more than three and a half or four and a half months. There is no room for development. You will probably find the placenta attaches itself in the fundus above the growth. The development will proceed and drop

below the growth and develop in the upper portion of the cervix, as it were, and after three or four months the room is so small that the tumor crowds the gestation out and you will have a miscarriage. If it does not do so voluntarily, you will be under the necessity of requiring it to do so, and when you have emptied the lower part of the uterus the contraction of one side of the wall will shut off the afterbirth in the upper story, and you have a real difficulty on your hands. A case of this kind I observed recently.

A lady whom, I presume, had been the possessor of a fibroid of the right middle segment for ten or twelve years, did not discover there was anything wrong except a certain amount of weight; but gestation unfortunately took place. Her local physician decided a fibroid was developing and an operation must be performed at once and made arrangements with a surgeon to do this operation. The family being a little dissatisfied with the situation, sent her to St. Louis for examination. The doctor had insisted that there was no pregnancy, but the tumor was growing so rapidly it would be necessary to remove it. I found the membranes protruding at the time she presented herself at my office. I was obliged to put her to bed to prevent an almost immediate miscarriage. There was a good deal of pain, but the progress stopped. I introduced two fingers and separated the cervix and the fœtus fell into my hand. I discovered the tumor in the right middle segment and the afterbirth in the upper story. I was unable with the assistance I had at hand to get through the contraction of the left wall of the uterus against the body of that tumor. I therefore allowed it to remain twenty-four hours. That will frequently have a little tendency, through the seepage of blood, to separate the parts. I then chloroformed her and thoroughly relaxed her, introduced a pair of forceps into the upper story of the uterus and got hold of the afterbirth. I removed one-half only. Then by compressing the fundus with the fingers and the reintroduction of my forceps I got the other half and drew it down and around and made a safe delivery. She was in no condition for a hysterectomy. The tumor being large, we could not take it out by the lower route, but it would require a laparotomy. I concluded to let this patient get well, if she would, and then have her return in the future, when I would remove this growth or the uterus as may be required. In a few days I discovered she was not going to get well in that condition. About the third day, the pains continuing all the time, about five

or ten minutes apart and oftener, I thought the uterus was making an attempt to expel the growth, which was about the size of a cocoanut. I found it to present like the head of a child with the membranes unruptured. In twenty-four hours more these portions had dropped out; the muscular portions were giving way and the fibrous portions were presenting. The discharge, of course, being present, I need scarcely speak of. I used intra-uterine packing to keep it in something like a fair condition to prevent the possibility of absorption so that my patient would not die of peritonitis. In a few days it had so sloughed out that I could catch hold of it and deliver it through the vagina. Not being able to get to the attachment which covered the side of the uterus from the internal os to near the fundus, or about where the round ligament would be attached on the right side, I severed it and removed the largest part. In about thirty-six hours the remainder had come down, and, under anesthesia, my patient being very weak by this time, I drew the remainder out into the vagina, and got my finger in the uterus to the attachment of the growth, and with a sharp curette I loosened it down to the very point of attachment. It was like a half-dozen pieces of rope twisted together by this time. After this she recovered as rapidly as a woman after an ordinary confinement. The uterus has been saved and the tubes and ovaries seem to be in good condition and she is in better health than for fifteen years. In undertaking laparotomy on this case for the removal of that uterus during gestation, what would have been the result? What would have been the result of removing it afterwards through the abdominal cavity? Undoubtedly a fatality.

I had another case of a growth that extended down into the cervix and into the middle segment. A midwife was in attendance. In about twelve hours the head disappeared and she waited about twenty-four hours longer, and then sent for a physician. He thought the case one of rupture of the uterus. There was but little hemorrhage, and apparently the child was in the abdominal cavity. I was called, and confirmed his diagnosis. I prepared her and made an incision and removed the child, and discovered the rupture was where the body of the uterus was attached to the growth. This was about the size of an ordinary child's head at full term. It pressed against the upper part of the anterior wall and it was not the head at all the midwife had felt in the cavity. We ligated the uterine arteries and

severed the posterior segment and took the uterus and tumor out. Established drainage as best we could through the vagina and abdominal cavity. The patient in about twelve hours died of the peritonitis which was in progress at the time of the operation.

In cases of this kind, should we be able to tell just what the difficulty is, a Cæsarean operation would prove successful; but after rupture has taken place it is almost impossible to save the patient with an operation of this kind. If we have an opportunity of doing the operation before the uterus ruptures, our patient has a good chance, and there is also a chance to save the child.

In growths of this kind that are small I have practiced exsection. I have removed the uterus, tubes and ovaries entire. It has been successful in the main. I remove these, if not too large, through the vagina. If large, I raise the uterus out of the abdominal cavity, ligate the arteries, and do the operation exactly as through the vagina, except in the opposite direction. I establish my drainage through the vagina and close the abdominal cavity. I have not yet had a death resulting from an operation of this kind, except the one just referred to, where the gestation had taken place and the uterus ruptured.

I believe this about covers the points in regard to work of this kind.

MEDICAL GYNECOLOGY.

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The medical treatment of ovarian and uterine troubles, as distinguished from the surgical treatment of such lesions, consists in the administration of medicine and the local application of remedies conjoined with dietary and hygienic measures. In many cases a judicious blending of surgical and therapeutic treatment is necessary and successful, and there are very few cases indeed in which surgical measures are not aided by therapeutics, diet and hygiene. There are, however, many cases of female ills which are amenable to treatment without recourse to surgical gynecology in so far as this means the knife, needle and curette.

The writer does not oppose the use of the scalpel in gynecology, nor does he believe that in the hands of competent surgeons the knife is unnecessarily resorted to, at least not frequently; yet there are cases in which cutting is not needed, and

still others in which the conditions are such that nothing surgical will help; cases beyond the reach of the knife and only subject to amelioration by therapeutical measures. It is such that call for the practitioner's therapeutical ability rather than his surgical proficiency.

Specialists usually suggest operative measures because they are consulted only in extreme cases in which such measures are probably essential, but the general practitioners, the rank and file, meet hundreds of cases of female troubles not severe enough to demand professional gynecological aid and yet of a nature requiring relief. This paper is intended to make a few suggestions in the treatment of cases of a mild nature, which may many times rescue the patient from something more serious in the way of greater troubles and save her from undergoing an operation of a serious nature, besides restoring her to health with a sound uterus and normal ovaries. Many surgeons are inclined to view forbearing indulgence statements from physicians that a cure can be accomplished in gynecological troubles except with the knife, intimating that such a cure occurs only when there are no pathological conditions present.

A few cases occurring in the writer's practice will be cited as showing the nature of cases successfully treated with medicine:

Case 1. January 1, 1900, Mrs. W., aged 27, married, three children; large and fleshy, but pale; has tenderness in the region of both ovaries, with pain on pressure; no appetite, constipated, weak, with hot flashes and cardiac palpitation upon slight exertion. Examination reveals pallid vaginal mucous membrane, leucorrhea, enlarged and subinvoluted womb; the menstrual period is prolonged and copious, continuing about fourteen days. She was given the following: Specific pulsatilla, specific senecio, specific cactus, specific caulophyllum, of each two drams, simple elixir q. s. to four ounces. Dose teaspoonful every four hours; also for constipation and indigestion, cascara cordial, elixir lactopeptine aa. two ounces, dose teaspoonful after meals. Locally she was instructed to introduce into the vagina a nymphæ odorata suppository, one every night upon retiring, an injection of warm water to be used every morning. She was instructed to use the fountain syringe, and this is about the only syringe that can be used with success by a patient. The various bulb and piston instruments require a patient to assume a position which deprives them of the greater part of the benefit from the injection. She

was kept upon this treatment for a period of three months, when she was dismissed as cured.

Case 2. Miss R., aged 17, a thin, pale and anemic girl, suffering intensely at each menstrual period with usual pains of dysmenorrhœa. The pain preceded the flow, subsiding upon its full appearance. For this patient, prescribed pulsatilla, senecio, of each two drams, simple elixir four ounces; a teaspoonful every four hours to be taken through the intermenstrual period. She was also given one tablespoonful peptomangan in half-glass water before each meal. She was greatly benefited by this treatment and the dysmenorrhœa relieved.

Case 3. Mrs. S., aged 50, widow; non-specific vaginitis, copious secretion, much rawness and tenderness of vaginal mucous membrane, which was denuded in areas, bleeding upon slightest touch. Use of the speculum caused intense pain; the urine when passed gave rise to much burning and smarting about the urethral and vaginal outlets; there was some swelling of the vulva, the patient was irritable, nervous, and very impatient. The treatment consisted in packing the vagina with powdered boracic acid. This was prepared every second day, and improvement was marked from the first. This patient recovered completely in twenty-eight days.

Case 4. Mrs. B., aged 20, petite and slender; before and since her marriage has had a profuse lucorrhœa, necessitating the constant wearing of a napkin. The discharge is of glairy mucus and imparts a slight greenish tinge to the cloths upon which it is received. She is otherwise in good health. She was given internally specific belladonna ten drops in four ounces of the elixir of cinnamon, teaspoonful every four hours. A vaginal injection was prescribed of one-half ounce creolin to one pint water, one ounce of this mixture being added to one pint of hot water. This course of treatment was pursued for one month, after which the leucorrhœa had entirely disappeared. In about a year there was a return of the trouble, when the same treatment again relieved in a few weeks.

Case 5. Mrs. C., aged 48, married; small in stature, very fleshy, has hot flashes, cardiac palpitation, various itching and tingling sensations; complains of "nervous spells," during which she is extremely irritable, cross and disagreeable; her menstrual periods are irregular, coming on at intervals of from five to twelve weeks, generally scanty; bowels constipated, appetite poor. Physical examination reveals no organic lesions except an

enlarged uterus, with cervix excoriated, red and swollen; there is also frequent urination, with burning and smarting upon micturition. For the general neurasthenia the following was prescribed: Pascarnata two drams, elixir five bromides two ounces, specific pulsatilla two drams, specific senecio two drams; teaspoonful every four hours. After meals she was given a teaspoonful of cascara cordial.

For the smarting and burning upon urination, specific eryngium two drams, specific apis ten drops, specific gelsemium ten drops, four ounces water; teaspoonful every four hours. This was the general nature of the internal treatment under which her condition markedly improved. The local treatment applied to cervix was confined to three months every two or three days, and was for a long time of no benefit. On January 16 an application of powdered boracic acid was made to the excoriated cervix, with directions for an injection of warm water the next morning. On Janury 18 this was repeated. January 20, no improvement having taken place, a capsule was introduced containing boracic acid, burnt alum, powdered hydrastus, acetanilid, tannic acid, oil theobroma aa. January 25, examination revealed considerable more irritation, swelling and soreness than before. January 27 an icthyol suppository was used, no improvement following. February 1, boracic acid was again resorted to and applied every two or three days until about the 15th of March. The excoriation had by that time disappeared and the tenderness much lessened, but there was considerable swelling and tumefaction of cervix. From the 15th of March to the 15th of April a nymphæ odorata suppository was regularly introduced into the vagina nightly by the patient herself, when she had improved so much in every way that all treatment was discontinued.

Case 6. Mrs. W., aged 30, one child aged 8 years; Mrs. W. dark and spare, very nervous and irritable, constipated, gastric indigestion, anemic; profuse uterine leucorrhœa, sub-involution, prolapsus, uterus and ovaries tender on pressure, dysmenorrhœa, scanty flow. She was given peptomangan and cascara, one remedy before, the other after, meals; also pulsatilla, senecio, caulophyllum and helonias in small doses every four hours. Locally, vaginal douches consisting of hot water with about five grains of asepsin in each quart, were ordered daily. Every third day a suppository of tannic acid in cocoa butter was introduced well up against the uterine cervix. This treatment was continued for about two months, when the patient was dismissed cured.

The above cases are given to indicate the general line of treatment followed in those cases which are not grave enough for surgical interference and yet sufficient to cause much suffering and discomfort to the patient. In the treatment of this class of cases, each is a study of itself, and the remedies adapted to the situation will suggest themselves to the physician after careful examination of existing conditions. We have quite an array of remedies for internal administration which are very satisfactory in their effects when given according to indications. Pulsatilla, senecio, caulophyllum, helonias, cypripedium, macrotis, ustilago, scutelaria, viburnum, aletris, and mitchella may be mentioned as of good reputation in female troubles, but there are many other drugs in the Eclectic materia medica which, when properly adapted to the case, will give abundant satisfaction. As to local treatment, this must also be varied to meet the indications: soothing, relaxing, astringent, or antiseptic, as the case may be. It is very seldom that local treatment alone will cure those irritating and unpleasant conditions arising from sexual derangements. A judicious combination of local and constitutional remedies is usually necessary for the best and most permanent results.

VAGINAL HYSTERECTOMY.

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Notwithstanding the great care taken by the modern surgeon in the preparation of himself, his patient, his assistants, his instruments, and everything in any way connected with his case; in spite of the most perfect technique in all its details, there is with every conscientious operator a good deal of anxiety with every abdominal section. The opening of the abdomen, the necessary manipulation and the exposure of the contents is often followed by the "shock" which is so dreaded by all, and until sufficient time has passed no surgeon can well feel at ease.

Where the condition of the tubes and ovaries is such as to demand their removal, under most circumstances the uterus should also be taken away.

There are several reasons why the vaginal route for the removal of the uterus and adnexa is preferable. There are some cases, however, where the organ or tumor is too large for the pelvic opening and its division would be fraught with too great

danger. Then a cœliotomy must be done. When you have decided upon the vaginal route for your work, the manner of doing it is to be considered. I will say there are four recognized procedures for the operation which are followed by a number of eminent surgeons, each plan having its special advocates.

To show the advantage of one procedure over the other is the object of this paper. The four methods referred to are the clamp, ligature, cautery, and the enucleation method. The latter was first used by Dr. Pratt in 1893. There are many dangers attending the use of the clamp, ligature and cautery, but it is exceedingly rare that any of these follow the enucleation method. It has been my good fortune to be in attendance and to assist Dr. Pratt with many of his cases, and I also speak from a personal experience in cases of my own, that the shock is of rare occurrence, and less pronounced when it does appear, following the new method. While this method is called the new operation for vaginal hysterectomy, yet it has been used by a few operators for a decade or more. There are several remarkable features about this method which are worthy of consideration.

All surgeons appreciate the dangers which are liable to follow an abdominal section: intestinal obstruction caused by the gut's adhering to the margins of the wound, or the vital parts being included in the grasp of the clamp, ligature, or sutures; and these conditions are rarely found in time to save the patient. Peritonitis and other septic conditions often follow the pinching, bruising or burning of the tissues by the clamp, ligature or cautery. Frequent sloughing and hemorrhage are occasioned by the clamp or ligature slipping off or cutting through the tissue.

The new, or enucleation, method for hysterectomy has its advantages in this, that it does not pinch or destroy the fibers of the great sympathetic nervous system and the important blood vessels, which contributes so much to the comfort of the patient and rapid repair of the tissues. All those who have made a study of waste and repair of the system well know the importance of avoiding nerve impingement, vascular constriction and normal tissue destruction.

The new hysterectomy of which I speak is made as follows: First thoroughly prepare the patient for the operation in the usual manner, and when this is done and she is in proper position and under the lethal influence of an anæsthetic, expose the uterus; then pass a strong plaited silk thread through the anterior lip and one through the posterior lip of the cervix, and have these

cords long enough to give a firm hold to steady the organ during the operation.

After these guy ropes are in position, and tied in a loop, they may be grasped by the operator or an assistant and firmly held while the uterus is dilated, curetted, douched and packed with sterilized gauze or candle wicking, which prevents the exit of uterine discharges and gives to the organ a firmness or solidity which makes it more definite in outline and easily distinguished from other tissues, thus making the operation more safe and easy.

The first incision is made through the vaginal wall just above the guy rope in the anterior surface, being careful not to cut into the bladder. The instrument best adapted for this work is a pair of long, curved, sharp-pointed scissors. The incision is to be carried around and backward to the *cul-de-sac* in a V shape, that the opening may be larger on the longer or posterior border of the uterus, thus giving more space for the turning out of the uterus than by the circular method alone.

While drawing down upon the guy ropes the areolar tissues are separated from the cervix with the scissors or spud, until the dense tissue of the cervix is reached, when the further work can be continued with the scissors alone, always keeping close to the uterine body in front, to avoid injury to the bladder; at the back to keep from doing injury to the rectum, and at the sides to avoid severing the uterine artery. All these important organs lie close to the uterus and are often fixed to it by previous inflammations, making dissections difficult and ofttimes even dangerous. The main blood vessels that supply the uterus, tubes and ovaries, do not enter these organs, but lie close to them, and send off minute vessels to supply them with nourishment. Hence by a careful dissection these organs can be removed by this method without damaging the blood vessels and with but little loss of blood.

The uterus, its tubes and ovaries, under careful dissection with fingers and scissors, can be turned out without great hemorrhage or danger, and where the tubes and ovaries are left within the abdomen, the work can often be done without entering the peritoneal cavity, almost like unhulling a nut, simply eneucleation. After removing the uterus, tubes and ovaries, all traumatic surfaces should be turned in and stitched with fine catgut, that no raw surface may be left within the abdominal cavity, thus precluding the possibility of its becoming attached to im-

portant organs or tissues which might consequently give trouble.

The broad ligaments and the peritoneum are now brought together with catgut and all closed up, being careful at all times while placing stitches that the uterine artery be not punctured. Should such accident occur, your stitching should continue, endeavoring to cast a loop of your thread about the artery, and thus constrict the same sufficiently to control the hemorrhage. No fear need be entertained of dangerous hemorrhage during the operation, as the parts can at all times be brought to view and the hemorrhage controlled. After the peritoneal cavity has been closed, the incised margins of the vagina are brought together with catgut, leaving a small opening at the posterior part, into which a piece of gauze wrapped with sterilized silk is inserted and left for a short time to effect drainage.

Hysterectomy, when performed in the manner herein described, seems to be not only a simple operation, but one comparitively free from danger. The patient is usually free from shock, suffers but little or no pain, and there is usually but little rise of temperature. In performing a hysterectomy after the new method there are no clamps to cause pain or contamination, no sloughs, and no ligatures to be removed. Repair begins in the wound at once.

To recapitulate the important benefits obtained from this operation, I will say that the loss of blood is a mere trifle, as the important vessels are not wounded, but left intact to nourish and repair the wounded parts. The shock is generally avoided. There is no nerve impingment, no danger of pinching or tying the ureters. The traumatic surfaces can be turned in everywhere, leaving nothing within the peritoneal cavity which might cause adhesion or constriction.

I will say finally that it is not the object of this paper to extend the domain of surgery beyond its present limits, but when the ravages of disease have gone so far that the repair of the organ cannot be accomplished, and their removal is imperative, then this method is commended because it lessens the risk of life, the recoveries are more prompt and less painful, and altogether more humane.

PLACENTA PRÆVIA.

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The location of the placenta on the cervix is an accident of unusual occurrence, and when it does occur, can scarcely ever fail to produce much anxiety and alarm among those interested in the case. Some writers have divided the implantation of the placenta into lateral, marginal and complete. By complete placenta previa is meant that condition in which the internal os is entirely covered by placenta. Lateral implantation of the placenta includes those cases in which the great mass of the placenta is attached to the side of the uterus. The occurrence will not probably be discovered until about the seventh month, a term at which the cervical portion of the womb begins to dilate and expand. In some instances, however, it is not discovered until labor comes on. In the majority of cases it happens that as soon as the cervix begins to expand, which is about the seventh month, parts of the placenta are broken or detached from the surface of the womb and a flow of blood ensues, which usually ceases on resuming the recumbent position. The patient perhaps resumes her daily avocation. In a short time, further expansion of the cervix detaches a fresh portion, and the exposed womb bleeds again. These attacks of hemorrhage are frequently repeated, until by their violence or weakness an examination is proposed, which reveals placenta prævia. Hemorrhage arising from this abnormal attachment of the placenta is called unavoidable, and when it makes its appearance, about the seventh month, or between that time and term, the case should be looked upon with suspicion. The danger of perishing to which the patient is exposed depends greatly on the dilatability of the os uteri and the strength employed in dilating it. The placenta should be separated on one side, thus allowing the child's head to descend into the neck, acting as a tampon, thereby checking the hemorrhage. I think that no prudent person would undertake to pierce the placenta in order to get the hand within the womb. There never can be so much difficulty in detaching as there would be in piercing the organ, for the rupture of the vessels would certainly be destructive to the child, and in case we decided to deliver by turning, the feet should be dragged through the perforation made in the placenta, the final delivery of the child would certainly be very much retarded.

DISCUSSION.

Dr. Norris: I saw a case of placenta previa where the doctor had perforated, not only the placenta, but also the walls of the vagina and uterus. The patient lived only a very short time.

Dr. Clayburg, St. Louis: The doctor spoke of detaching the placenta and allowing the head to come down. I have had a little experience along that line, and it is not enough to do that. It is absolutely necessary that you rupture the membranes and discharge the liquor amnii. Detach the placenta from the uterine wall as far as the finger will reach, then discharge the liquor, and the uterus will retract and force the child down. I do not think it a serious matter to perforate the placenta. I have perforated the placenta two or three times in the early months of pregnancy and delivered the fœtus without bad results. I have seen men who did not know a placenta by looking at it, but an educated finger that does not know it should not be allowed to attend a pregnant woman. I had a recent experience. I found the woman in labor, sitting in a chair, the bed covered with blood. I watched the case, and did what I do not approve of as a rule. When I have made a diagnosis of placenta previa I have no right to leave until the termination, and if labor does not come on, I stay and see that it does. The probability of saving the life is so problematical that I have no right to sacrifice the woman. A slight dilatation of the cervix and hemorrhage was checked. On the second hemorrhage I detached as far as I could reach, and then tamponed so thoroughly there could not be any more hemorrhage, and put on a bandage and tightened it and left it for four hours. I tell you there was something doing, and when I removed the tampon I found most of the cotton was as clean as when inserted. I applied the forceps and delivered the child, and I saw the woman and child recently, and both are well. The danger in these cases is from sepsis as well as hemorrhage. Never attempt to terminate a case until you are prepared to meet the possibilities. I don't like vinegar, for it is full of worms. I want acetic acid, an ounce to a quart of water. Have a clean new fountain syringe with glass tube, and pass a stream of hot water into the uterus and saturate the patient with ergot, and you prevent sepsis and possibly save the patient's life. I want to impress upon your mind the importance not only of detatching the placenta, but of rupturing the membranes and discharge the

liquor amnii, and if you don't know the difference, you should keep your fingers out of the vagina.

Dr. Shafer: I can't see why he wants to use acetic acid after the womb has been emptied. I cannot understand why he should put a foreign substance into the uterus.

Dr. Clayburg: It is this: The placenta being attached to the lower uterine segment, where the power is not sufficient to close the vessels, we do it to stimulate the action. The danger arises from the fact that the placenta was attached to the lower segment. I simply use it as a safeguard, and I do not consider it putting a foreign substance into the uterus. I would inject sterilized water for the purpose of stimulating the uterus to contract and retract. The danger is that bleeding begins from the lower segment, where there is not sufficient power to contract. If there is no hemorrhage you don't need it.

INSTRUMENTAL INTERVENTION.

DR. PIERCE, LITTLE ROCK, ARKANSAS.

Instrumental intervention in obstetrical cases is something we have but very little call for; where we have a normal pelvis, and uterine contractions that are sufficient, your instruments will not be needed. But when you have a case of mal-presentation or deformed pelvis, or a case where the head of the child is too large for the bony outlet, you will have to use either the forceps or the perforator. Where you have an abnormal condition to contend with, the first thing is to decide what is to be done; next, to do it before your patient becomes thoroughly exhausted from the labor so she is not able to undergo the operation. There are two distinct methods of applying the forceps: The English method is to apply the forceps to the sides of the pelvis, regardless of the head of the child or how the forceps grasp it. The American plan is to apply them to the sides of the child's head, regardless of the position it occupies in the pelvis. The last method is a little more difficult than the first, but it is not nearly as liable to cause trouble or injury to the head of the child as in the English method. Of course you all know how the forceps are applied. First one carried to the left side and then the other to the right side of the patient, and then traction made. In case where you have to use the perforator or hook, you want to

carry the perforator deep down into the brain. Open the blades of it and take it out and drain it, and open it again, so you make two incisions and empty out as much as possible. If you have to use the vastotribe, of course the point must go in as deep as possible, and you draw one blade down at a time and draw the child's head down to crush it; and if you have to dismember the child, you use instruments for that. It is hard to tell just what you are going to have to use in these cases. I was called in consultation some time ago, a woman with her first child. There seemed to be a normal pelvis, and uterine contractions were sufficient, but the child's head was simply too large. The child had to be taken to pieces, and it was weighed afterwards, and weighed seventeen and a half pounds. In cases of that kind you don't know what you have to do until you get into the case; but the main thing is to remember that the life of the mother is the first thing to think of. Always preserve that, if possible, regardless of the child. If you can save both, do so, but the mother, if possible, no matter what you have to do in instrumental delivery.

POINTERS TO SUCCESS IN OBSTETRICS.

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We, as accouchers, are liable to neglect the small things in obstetrics which often develop into critical conditions, at least in the primipara. When a pregnant woman has been placed in our care until after the parturition, especially if she is a primipara, we should at once inform her of the changes she should expect and conditions that are liable to develop, and how to take care of herself during her gestation. We should see that the excretory organs are properly performing their functions, and if we at any time see any symptoms of albuminuria we should examine the urine and, if it contains albumen, proceed at once to relieve. We should manage to see our patient every ten to twenty days, if abnormal conditions exist, and should leave instructions if anything unnatural should develop to have us see them at once. We should not allow her to think she is an invalid because she is pregnant, for we want a healthy mind for the sake of the offspring, as well as for the good of the mother.

It is prudent for us to prepare our patient for the ordeal she has to go through from six weeks to two months before the time of her parturition. I give her some treatment if there are indications for it. If she is inclined to have sharp, shooting pains through the abdomen, I give her: ℞ Bryonia gtt. x, macrotys ʒ j. aqua ℥ iv. Mix. Sig. Teaspoonful four times a day. If she has any tendency towards aborting, I give caulophyllum gtt. xxx, macrotys ʒ j, aqua ℥ iv. Mix. Sig. Take the same as first prescription. If she is troubled with nausea, stomach and bowels inactive, add nux vomica ten drops to the macrotys, and if always anticipating trouble, pulsatilla thirty drops.

If troubled with constipation, have her to take with one of the former prescriptions, prunes stewed in senna tea, prepared by steeping an ounce of senna leaves in one quart of water, strain and stew one pound prunes in it, put in a jar and keep where it is cool, and use enough of the prunes to have the bowels move once a day. If she is troubled much with her urine, have her rest on her back as much as possible, and when she is on her feet, to wear an elastic abdominal supporter, and have as firm pressure above the pubic bone as she can bear with comfort. So many women, at least the primiparæ, have trouble with their mammary glands when they begin to nurse the child. It is better for us to use prophylaxis, then curatives. It is a good idea to commence about two weeks before the confinement to bathe the nipples and areolas twice a day with ℞ Sp. fermenti ℥ ii, gallic acid gr. x. Mix. Bathe the glands with pure whisky. When the milk begins to come in the gland after the birth, see that the breast does not get too full. If the child cannot consume all the milk, use the breast pump. If the nipple is not prominent enough for the child to get hold of it, use hot bottles to draw them out, and if they get sore you may have to use a shield for the child to nurse.

If you do not instruct the mother, you will find very few bands properly made for the baby. The most of them are made so wide that you have the most of the pressure on the lower ribs, instead of being on the umbilicus, where you want it. She should have them made with arm holes and to button about three inches below the level of the axilla down the back, then below that the band should be left long enough to go around the child twice, then work a slot to the side of one of the tails of the band, so you can slip the opposite tail through it, and pin

the ends right over the umbilicus. This will give you the pressure where you want it.

Do not expose your patient unnecessarily. Ligate the cord the first time three or four inches from the umbilicus, then cut it, and hand the child to the midwife to be wrapped in a blanket, and if it is all right lay it away until you get the placenta or secundines away, and the obstetrical cushion with its contents removed and a dry pad placed under the mother and her bandage put on. Then she is ready to rest. Then you are ready to turn your attention to the baby. Have the midwife to annoint the child all over with sweet oil; then take clean, soft cloths, and she will be able to remove all the oil, with all of the excretions that were on the child's skin, with very little trouble. After they have dressed the child they can use some water and soap on its hands and head; then about ten or twelve hours later they can wash the child all over and dress it again. In dressing the cord before the child is dressed, I carefully ligate it the second time, about an inch from the umbilicus, with heavy white linen thread or silk ligatures, and thus prevent the possibility of hemorrhage; then dust around the cord with kalendol and envelope it with aseptic cotton, and you are ready for the bandage that you had prepared. Instruct the nurse when she washes and dresses the child to always examine the cotton, and if there is any moisture next the child to lift it up and dust well with talcum powder, and then you will not have any trouble, and the cord will drop off in about five days. It is always best to leave a solution of ergot, with directions how to give it if there is any tendency toward hemorrhage, and to leave three or four five-grain powders of Dover's powder to be taken if the after pains become unbearable after using local applications.

Never fail to instruct those in attendance not to do anything to excite the patient, as sometimes too much grief or too much mirth is liable to produce puerperal mania. I had a case, where a sister came into the lying-in chamber and commenced to dance and go through some gymnastic exercises, which caused the patient to laugh very heartily, which caused puerperal insanity.

Lay the baby on its right side for the first twenty-four hours; this will aid in establishing a circulation.

Some of these points may appear very trivial, but they often save a good deal of trouble if observed.

SECTION OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

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CALENDULA IN EYE AND EAR DISEASES.

MARQUIS E. DANIEL, M. D., HONEY GROVE, TEXAS.

Calendula has been used as a domestic remedy for sixty years, but it has been only within the past ten or twelve years that the medical profession has given it deserved attention, and the most that has been written upon the therapeutic application of the remedy has been written within this time.

In 1892 I submitted a lengthy report in *The Annual of Eclectic Medicine and Surgery* upon the therapeutic application of calendula in general practice. Since that time I have greatly extended its use to my satisfaction and to the delight of my patients.

In that report I spoke of its value as a local application in all lacerated and contused wounds of the integument, besides being of special value in acute and chronic inflammatory conditions of mucous and serous membranes, regardless of the part involved.

In this paper I will speak of calendula only as used in ophthalmic and aural practice, and to further warn, if not already perceived, my professional friends of what I believe to be a gigantic imposition being practiced upon the profession relative to this remedy.

Non-alcoholic calendula, the preparation I use, is harmless when applied to the skin or to mucous and serous membranes, regardless of the strength used. Its effect upon mucus and

serous surfaces is to stimulate the removal of or absorption of all abnormal tissue. Obstructions and opacities, if not too long standing, will be softened and afterwards absorbed.

Calendula is one of our best and safest agents with which to combat acute and chronic inflammatory affections of the eye and ear, including muco-purulent, purulent and phlyctenular conjunctivitis. It is one of our best antiseptics, and is of special value in the treatment of all non-malignant ulcerations of the cornea or elsewhere. It prevents all tendencies toward suppuration and sloughing when commenced in time, and quickly puts an end to such conditions when existing after the remedy is commenced.

Of course the indicated internal remedy must always be given close attention. As a styptic it is all sufficient when there is merely conjunctival hyperæmia, either with or without inflammation, and at the same time it is sufficient as an antiseptic in such cases.

In ecchymosis, lacerations, operative or accidental, I apply it by saturating an absorbent cotton pad with from a 25 per cent to a full strength solution. It promotes union by first intention, and should a degree of inflammation arise it hastens resolution and in most every instance prevents suppuration and cicatrization.

As a local remedy in eczematous conditions around the eye or ear it stands first with me, applied full strength or diluted, as seems best in each individual case.

In hyperæmia, acute and chronic conjunctivitis and ulceration involving the anterior portion of the eyeball, I use it in strength from ten drops to one dram of distilled water, hamamelis or rose water one ounce. Calendula will induce absorption of the conjunctival papillæ, so often taken for granulation. When true granulation does exist, operate with Knoppi's forceps and follow with calendula one-half dram, distilled hamamelis sufficient to make one ounce. From four to six drops in the eye three or four times a day.

In hypopyon it will do fine work, and in this condition and chronic catarrhal thickening of the conjunctiva, it may be combined one dram with distilled hamamelis sufficient to make one ounce. From three to five drops in the eye three or four times a day. In all circumscribed and diffused inflammations of the external auditary canal use it freely combined half and half with glycerin.

In all pannised and cloudy conditions of the cornea, when

not too deep, this remedy will promote absorption and clear up the cornea when other agents fail. I have treated cases of this character that had not been able to see to walk alone or to sew or read for years. They regained their sight after from two to ten months' use of this remedy sufficiently to walk, sew and read to their satisfaction and have remained well since discontinuing the remedy.

As to the imposition mentioned in the beginning, will say, at the risk of being ridiculed, I am ready to go on record as believing that the so-called *Succus Cineraria Maritima* is nothing more than non-alcoholic calendula. It is in just such cases just mentioned that it has made its reputation. In true cataract I have yet to see any perceptible improvement from its use. I will admit that when there is slight capsular haziness due, as is often the case to faulty circulation, the result of sluggish ciliary activity, it will put all the latent elements to work and improve ciliary activity, but non-alcoholic calendula will do the same work. Both preparations look and smell alike and produce the same sensation in the eye.

Both remedies are controlled by the same manufacturer, and the only difference I have been able to detect is that calendula can be had for a dollar per pound, while Succus Cineraria Maritima costs one hundred and twenty-eight dollars per pound, or one dollar per dram. These same people sell Howe's Juniper Pomade under another name for one dollar per two-ounce jar. Let me advise you that non-alcoholic calendula will serve your purpose the same and better than the Cineraria Maritima.

One of the main questions that arises is how to stop these fellows that are claiming to cure cataracts by instilling remedies into the eyes. I have never found a remedy that would have any effect on a cataract one way or another. This remedy that you mention at one dollar a dram I have never had, but do not see how any remedy could have effect on a lens in the formation of opacities; but as a general remedy calendula, I think, stands almost at the head for chronic or even acute inflammation, provided it is used properly for each case. The tissues must be very well guarded. In some cases it will increase the inflammation where the same strength in an apparently similar case it would benefit in ten to twenty-four hours; therefore I am very guarded and watch my cases in using it, and if I find the patient is going to be away two or three days, I am particular to men-

tion that if the remedy should irritate to reduce it about half with water, and usually have good success.

DISCUSSION.

Dr. Harbert, Ohio: I have used calendula in post-operative cases on the eye with great success. After operations on the canaliculus or tear sac, I would have ice water brought to the side of the bed and the calendula poured in. I use the non-alcoholic, and do not pay much attention to how much I pour in; make the ice water well colored with it and have the cloths changed frequently, and I find it favors union by first intention. At first I combined it with hamamelis and hydrastis, and could not tell where I got the good. I don't use anything with it now, and it prevents formation of pus. Have been pleased with its use in supurative otitis media.

Dr. Daniels, closing discussion: In answer to the question concerning the strength used, you will remember I mentioned I used ten drops to a dram to an ounce solution, and as to the strength applicable in individual cases, it will depend upon the way the eye receives it. If it irritates, reduce it, but if not, increase it as the patient may receive it. As to the cataract feature, I presume all are familiar with the literature that has been distributed broadcast over the country lauding the use of Cineraria Maritima, which it is claimed will induce absorption of cataract, I have never gotten results where true cataract existed, but there are diseases where there is slight haziness on the lens and lack of vitality and want of power about the eye where I have had benefit. This remedy seems to improve the circulation through the eye and to improve the ciliary circulation about the lens. In cases of that kind it will improve the sight very materially, and I think it was in these cases that this remedy was first brought into notice. But this remedy I speak of, the non-alcoholic calendula will do the same thing, and I believe both are the same.

Dr. Johnson, Texas: I desire to say something about this remedy that was mentioned to absorb cataract. I have used it, and there is absolutely nothing in it, so far as my experience goes, so far as its absorbing any opacity of the lens. I have used it frequently to convince myself that it will not do the work. There is one condition in which it is a good remedy, and that is where we have posterior synechia. Using that in connection with atropin, you will get better results than in using

atropin alone. In that condition it has served me well, but as for its absorbing the cataractous lens, it is a physical impossibility.

Dr. Harbert, Ohio: So far as I can learn, it has no influence on the pupil. I think we ought to be very careful about recommending anything for an eye drop in case of cataract. The general practitioner does not recognize the difference between a cataract and a cataractous condition of the lens, and if we are not very careful we will have our men trying different eye drops for the absorption of true cataracts. I do not think there is anything that will absorb cataract.

Dr. Trowbridge, Chicago: I have a remedy that has not been mentioned I have used in cases of haziness, and that is fiscus stigma, Lloyd's, three times a day. Just at the beginning when there is a haziness I am satisfied that it does have some effect. I think it acts upon the circulation, increasing the nourishment of the eye and carrying away the deposits that cause the haziness.

Dr. Ketchum: I must add my testimony as to cineraria being of no value whatever in clearing up the cataractous lens. I have failed to get anything like results.

DEFORMITIES OF THE SEPTUM.

E. G. Trowbridge, M. D., Chicago, Ill.

Deformities of the septum are confined largely to the civilized races of man. This conclusion is the result obtained by examining the skulls of American, African and Australian aborigenes and also examining patients in large hospitals. From 75 to 80 per cent of the aborigines had normal nasal septa, while the patients examined in the hospitals had only about 10 per cent of normal septa. A proper classification of these deformities would be very difficult, for sometimes the septum curves into one nasal passage, but has no thickening; sometimes it has spurs or conical projections, but no curves; sometimes it curves and also has spurs on the convex surface; sometimes it has a double curve; some noses have a longitudinal ridge in one nostril, some have a niche, some have a bridge connecting the bony septum with the lower or middle turbinated, some have several irregularities, and others have other deformities too numerous to mention.

Stokes' classification is as good as any, and is simple: First, angular; second, curved; third, double curved.

The cause is a many-sided question. Bosworth and many others think that the cause is principally traumatic. Some think that many deformities are due to an overgrowth of the anterior portion of the two laminæ of which the vomer is composed; some think a highly arched palate is the cause; others think an overgrowth of the septum in a confined space is the cause. Zeim experimented on young animals, and his experiments point strongly to nasal stenosis being a very numerous cause. He packed one nostril with some soft substance and left the packing in the nostril for a long time. In every instance the septum was deflected toward the closed nostril. The reason is that the air in the closed nostril is rarified by the air rushing through the open one, and the atmospheric pressure being less on the side of the septum toward the closed nostril, it slowly yields to the great pressure. There must be at least a partial stenosis before there will be a rarifaction, and this may be due to several causes, chief of which is the habit, which many a mother has, of always laying her child on the same side while sleeping. This causes the blood to gravitate to the lower nostril, produces hyperemia and a partial stenosis.

A great many persons whose septa present marked deviations, spurs or ridges have few or no subjective symptoms. Just why it is difficult to tell. Others have more or less nasal interference and will breathe through the mouth. Many have hypersecretions, defective nasal drainage, sense of smell affected, myalgia, attacks of sneezing, headache, neuralgia, reflex nervous symptoms, middle ear troubles and perhaps deafness. Septal deformities are not always the cause of the above troubles, but when they are, correcting the deformities affords relief.

Diagnosis is usually easy, but a good, light head mirror and a suitable nasal speculum are necessary. With these the physician can see the defects.

Different methods of treatment have been advised and practised, but surgical interference is by far the best when any treatment is indicated. This brings us to the question, when is treatment indicated? And we answer by saying, when the deformity causes trouble; for if the deformity is ever so great, yet does not cause trouble, it is better to let the septum alone. Occasionally it is desirable when operating to have the patient under complete anæsthesia, but usually cocaine anæsthesia is sufficient. First

spray the nose with a cocaine solution, then twist some cotton on the end of a toothpick or applicator and, after wetting the cotton in a 10 per cent solution of cocaine, apply it to the septum where we wish to operate, and leave for ten minutes, when the parts will be sufficiently anæsthetized. Spurs are usually sawed off, first sawing from below upward, then from above downward. Ridges are removed with a knife, a spoke shave, or by electrolysis. Deviations of the septum are corrected by first crushing the septum or cutting it in different directions or cutting out a piece, then pushing into place and holding there with splints or tubes until the parts are healed. Care must be taken that the hands and instruments are aseptic and that every two or three days the splints or tubes are removed, cleaned, and carefully put back in place.

I have with me a number of instruments, a portion of which were kindly loaned to me by Messrs. Chambers, Innskeep & Co., of Chicago, and I will now show them to you and explain their use.

DISCUSSION.

Dr. Whitford: Why should not stopping one nostril cure these cases without operation?

Answer: I suppose it would, if handled right at first; but the trouble is we don't see these cases until pretty well developed. They are treated for something else.

The treatment in a young child ought to have some influence.

Dr. Johnson: Would you leave the tube in only ten days or two weeks?

As long as necessary, until the parts are thoroughly healed.

Dr. Johnson: I never take the tube out for four weeks, and sometimes let it be worn for six weeks. You have to leave it until the septum will get back to the normal condition. It is not like bone tissue. I leave it in four weeks, but think you should wash it twenty-four hours after the operation.

Dr. Harbert: I want to caution against a mistake frequently made about the deviated septum. Frequently you examine one side of the nose, and before you are aware you will say you have a deviated septum, and you look into the other side and you find there is no deviation. Frequently it is a spur or ridge. Another thing I wish to recommend is the use of adrenaline chloride solution to prevent hemorrhage. I now always in every nasal operation use this solution. Saturate the cotton with it the same as cocaine and leave it in the nostril five to eight minutes,

and pack the nostril with a 20 per cent solution of cocaine if you do not give a general anæsthesia. The adrenaline solution will so contract the blood vessels that it will control the hemorrhage. It is always a painful operation, and a 20 per cent solution of cocaine will not do harm provided you have no idiosyncrasy in the patient, where none could be used. The adrenaline solution will prevent the loss of an ounce of blood. In operations on the turbinated bones you can use it where you usually lose quantities of blood. There is not much room, and the blood comes and you do not know what you are doing, and I think this is one of the nicest things I have had in the last few years. Another thing is the cleansing every day. I think that is imperative. You will get sloughing if not. Be careful to push the septum over further than it should go, because it will go back some when it heals.

Question: What strength of adrenalin do you use?

Answer: A 1 to 1,000 solution is sufficient for all purposes. I use it in combination with the chloride. I get it from Parke, Davis & Co.

Dr. Johnson: I use it and use 50 per cent of the 1-1000. I want to say that if any of you doctors ever have your septum operated on, take an anæsthetic.

Dr. Tucker, Chicago: The using of cocaine in the nose and throat in the strength the doctor recommends is dangerous. There was a patient died in the chair in the building where I am in Chicago from a 10 per cent solution, and I believe it is not safe to recommend or advise the use of 20 or 40 per cent in the nose or throat unless you know your patient is not susceptible to cocaine.

Dr. Harbert: When you get the influence of the adrenal solution you do not get the systemic effect that you fear. It is true fatalities occur from a one to two per cent. There is a great deal of danger in cocaine and I would caution in the use of it.

Dr. Clark, Chicago: I used cocaine once for the amputation of the breast without trouble: injected it where I was going to cut, and the patient never flinched nor appeared to feel pain, nor did she have unfavorable effects afterwards. Have used it for amputation of fingers and thumb, and things of that kind. Have used it sometimes for dissecting out small tumors, but 2 per cent is as strong as I ever think of using. I think there might be error in making too strong a solution in injecting for surgical

cases. Certain it is that the magazines tell of cocaine being used extensively. Even warm water injected to produce distention of the tissues benumbs and takes away much pain.

Dr. Ketchum: My experience is that the septum will never stay right until you make a cross incision and then fracture the cartilage. They must have a general anæsthetic if you want a good shape. Break it up. Then insert the tube. Insert two, one on each side, the smaller on the non-operative side, where the greatest space was, and leave them both there. Leave both twenty-four hours, then cleanse, and leave the one on the well side thirty-six hours to two days,, then remove that permanently, leaving the other for several weeks until healed.

CONSTITUTIONAL TREATMENT IN DISEASES OF THE EYE.

J. P. HARBERT, M. D., BELLEFONTAINE, OHIO.

In the treatment of both acute and chronic lesions of the eye and its appendages, internal treatment stands side by side with local treatment in importance, and even in some instances takes precedence.

The eye is so intimately and delicately connected with the system at large by means of the general and sympathetic nervous systems, its blood supply is so direct, and its structure so constituted that internal treatment offers us the best and, in some cases, the only hope of accomplishing anything like the desired end.

In acute inflammatory troubles in other organs we at once prescribe our sedatives and indicated remedies and expect results. Why not so with the eye? I have come to recognize the importance of and benefit to be derived from the administration of proper internal treatment in acute eye troubles to such an extent that no case leaves my office without the indicated remedy for internal use.

In sub-acute and chronic cases we must be guided by the symptoms before us, and local treatment in these cases, if depended on alone, will be disappointing.

In injuries to the eye or its appendages, nothing will so modify and cut short the train of symptoms following as the judicious use of Spc. aconite and rhus tox internally. I always

prescribe these remedies in cases of traumatism, and always immediately following operations on the eye.

In simple catarrhal conjunctivitis, rhus tox, pulsatilla or euphrasia, as called for by the increased lachrymation and burning, by the dryness and itching and sensation as if a foreign body was in the eye, and by the catarrhal or muco-purulent discharge respectively, will be curative and will cut short the disease.

In all forms of ophthalmia, whether simple, phlyctenular, gonorrheal or ophthalmia neonatorum, we are careful to assist our local treatment by the use of our specific euphrasia, belladonna, apis or pulsatilla. I think euphrasia exercises a wonderful controlling power over the formation of pus or muco-purulent discharge, and I have seen the discharge diminish one-half in twelve hours after euphrasia thirty drops to four ounces of water had been given every hour in teaspoonful doses.

In trachoma we see that the bowels are kept open; that our patient gets exercise, baths, etc., and we give internally rhus tox, pulsatilla, phytolacca, Fowler's Solution in drop doses three times a day, or occasionally the potassium iodid, well diluted.

In iritis we use aconite in the first stages, rhus for the increased lachrymation or when caused by traumatism, bryonia in cases occurring from rheumatism, potassium iodid when of syphilitic origin. Sometimes the gelsemium for its effect on the nervous system, belladonna for the photophobia, apis for the stinging pain and edematous condition, Fowler's Solution in drop doses for its alterative effect where we find the peculiar inelastic skin.

In ciliary blepharitis and in hordeolum, we find specific rhus, pulsatilla or lime water, picrate of lime or sulphide of calcium to be the indicated remedies.

In acute dacryo-cystitis I generally prescribe pulsatilla. In chronic cases, frequently the second trituration of calcium sulphide in five-grain doses will be helpful; also the second trituration of silicea in five-grain doses where there is soreness and tenderness and a tendency to caries.

Ulceration of the cornea demands careful and continued constitutional treatment. These cases are frequently found in poorly nourished patients having a scrofulous diathesis. I have observed constipation to be present in a large number of cases and have experienced great improvement after proper attention to the bowels. I like the magnesium sulphate in proper doses used each night for a week or ten days.

Phytolacca is indicated very frequently by the enlarged lymphatics and for its kindly influence on the lymph channels in the cornea. I frequently combine it with the iris or corydalis.

Belladonna is often called for to relieve the photophobia, apis for the stinging pain and edema, bryonia for the supraorbital neuralgia and pain increased on motion, calcium sulphide in the usual dose to supply the lime salts will be helpful; arsenic to meet the usual indications for this remedy.

Interstitial keratitis will call for potassium iodide in doses of two to fifteen grains, largely diluted. I like the iodide of arsenic in some of these cases. Donavan's solution, Fowler's solution, iron, phytolacca, iris, corydalis, kalmia, rhus and bryonia will all be curative when we have the peculiar symptoms calling for each remedy.

Constitutional treatment for glaucoma is often attended with success. I like the action of specific physostigma ten drops in four ounces of water; a teaspoonful three times a day. Jaborandi and gelsemium given in alternation for a week at a time have been found to give relief in some instances. Macrotys acts kindly, especially in women who suffer exacerbations at the menstrual period.

Hemorrhages into the vitreous will clear up and become absorbed by the influence of potassium iodide. Jaborandi is also recommended for this purpose, and I have had good results follow the administration of specific bryonia and hamamelis.

Traumatic choroiditis is benefited by rhus tox, while macrotys, the salicylates, and bryonia will be indicated in other forms. Pulsatilla is a good remedy here and tends to calm nervous fears. Other conditions and diseases will demand treatment on the foregoing general lines.

DISCUSSION.

Dr. McCann, Indiana: I think a great many men in the treatment of eye troubles lose sight of the internal remedy. I am not a specialist, but we must meet these troubles that come to us, and I rarely fail to treat the troubles presented without the indicated remedy. In eye troubles you need not be afraid of pulsatilla. It will not be far wrong. We must meet these troubles with the general remedy the same as we use in the general diseases of the body, and I believe a man who is treating eye troubles does not do his duty if he does not give the internal specific treatment.

Dr. Rollin, Iowa: I am not a specialist, but have taken quite a number of eye cases that have been sent to me as family physician that the specialists could not cure and had sent them back for constitutional treatment to the family physician. One had been taking local treatment for four weeks, and he wanted me to treat him. I put him on aconite and rhus and the local treatment I used was a simple soothing wash. In two weeks he was able to go to work. I had a case from a specialist at Waterloo who had a great reputation. He treated the patient for three or four months, and told him he would have to go back to his family physician, for he must have constitutional treatment. I put him on treatment and he soon got well. These cases were granulated eyelids.

Dr. Borland: I have great faith in constitutional treatment in some cases of sore eyes, and I think I can treat sore eyes as well as most physicians. I do not lay any claim to being a specialist, but I have them frequently to deal with. About three or four years ago I got an optician in my office and turned the patients over to him. Under the laws of our state he cannot use medicines, and he turns his over to me, and I tell him what to do, and he does it and the patients get well. About three years ago a lady, 69 or 70 years old, came to my office. I knew her. She had been taking treatment of an oculist in our town—a man considered fair in that line—and she wished me to make an examination. I got the oculist, and he is a good one, and he said he could find nothing wrong but a presbyopia from age. No structural trouble of any kind; that led him to think there must be some constitutional trouble, so I questioned her in regard to the condition of her system generally, and it struck me there might be some irritation at the base of the brain or along the spine. I found there was tenderness along the back of the neck and back of the head. I ordered some of the hair shaved off and put a plaster on and gave orders how to take care of it, and if my memory serves me right I put her on the syrup of trifolia, compound Fowler's solution and rhus tox, the latter combined. Protoiodide of mercury, one tablet every night. You all use it a little—if you don't, you ought to. Prof. Scudder used it, judiciously, of course—specifically, of course. I did not hear from her for two or three months. When she came in I said, "How are your eyes?" She said, "The blister took the soreness out of my neck and they are well. My optician examined them, and could not tell whether they were well or not. But she said

they were. I don't think there is anything in which there is so much humbuggery possible as in the diseases of the eye, unless it be of the rectum. One is as big a humbug as the other.

Dr. Harbert: Dr. McCann mentioned pulsatilla. I believe it is the most frequently indicated remedy we have. I believe the men who recommend these remedies know what they are talking about. Another thing I object to is that a physician should put an optician in his office to examine his patient's eyes. I don't say an oculist, I say an optician. It is not more than one in a hundred that knows more than an ordinary school boy about the eye, and nine times out of ten they cannot tell whether there is opacity of the cornea or what it is, and all they can do is to correct the simple errors of refraction if they take a half hour or half day to find out. I object to this odium being attached to the eye men, who devote their lives to this work.

AMETROPIA AS A FACTOR IN CAUSING DISEASES OF THE EYE.

M. B. KETCHUM, M. D., PHAR. D., LINCOLN, NEB.

To my mind and in my experience I am fully satisfied that the medical profession in general is not sufficiently impressed with the importance the derangements of the ocular mechanism deserves as a causative factor in many of the destructive diseases of the eye, and I wished to hear the subject fully discussed at this meeting.

It is becoming pretty well known that numerous systematic disturbances are the result of reflexes arising from eye anomalies, but the fact that hypermetropia and astigmatism especially is often the direct cause of severe forms of conjunctivitis, keratitis, cataract and glaucoma is a point that demands more frequent consideration by a good many physicians than they seem disposed to give it. I have had numerous cases of stubborn and recurrent forms of conjunctivitis and ulceration of the cornea that have been the rounds, and in apparently good hands as regards local treatment, but without material benefit, and, in fact, with really discouraging results, which after a little soothing treatment and careful refracting, the patient wearing glasses continually, I have made cures that the patients considered were perfectly wonderful. I have come to make it a part of my

routine examination when a patient comes in with a history of anything like a protracted disease of the eye, conjunctiva and cornea especially, to modify the irritation as much as possible with a solution of cocaine and adrenalin chloride and proceed to detect its manifest ametropia with the trial case. I do not expect to correct the vision fully at the first examination, but I will get the best results I can under the circumstances, and will put glasses on right from the start; then with my usual treatment fair results.

Nearly every case of cataract that comes to me I can trace back to a history of defective vision, and I am becoming more and more convinced that were every ametrope to receive careful refraction at a period comparatively early in life that we would have an extremely modified number of cataracts to deal with.

Just why defective vision should produce and excite diseased conditions of the eye is a very easy matter to sum up. Of course, if the eye were simply a mechanism without life, no change could occur, because no abnormal effort on the part of the patient could produce any changes, but being the most active, and possibly the most sensitive, organ of the body that is subject to external influences, it stands in the way of being continually misused; and hence the most perfectly formed, healthy and well balanced eye is the only one from which we can expect anything like perfect and continual service without detriment to it in any way, and this even must be supplemented with a perfect systemic condition.

Unknowingly one with a defective eye expects as good results from it as from a normal one, and up to a certain period often gets fair satisfaction from it; but there must come a time when the poor, crippled member will call loudly for help, and in the majority of cases even then does not get it. Suffering from overwork, with its consequent train of evils, what can we expect from it but some functional or structural wrong to develop? and I admonish the practitioner who is engaged in general medicine and surgery to look into these matters very closely. The oculist cannot do this because he does not know nor see these people until their afflictions drive them to him; but the general practitioner, with his unlimited field for an extended acquaintance, can do much for the future of his clientele by properly directing and advising them during the early period of their lives.

DISCUSSION.

Dr. Rollins: I want to make one remark in regard to internal treatment. I think oculists would do better if they would study that part; but the doctor was wondering what did the work, whether internal remedies or rest. In this case from Waterloo they continued the local treatment and got well, and the other case did not have the internal treatment, and another case that was brought to me similar to that bears on your paper. I think they needed glasses and the eyes would get well without treatment. You can draw your conclusions as to what did the work.

SURGERY OF THE MASTOID.

W. N. MUNDY, M. D., FOREST, OHIO.

There is no class of diseases that appeal more strongly to the physician for prompt and skillful attention than do those affections of the mastoid. Fortunately for myself, my individual experience in this particular line of aural surgery has been limited to a few cases of periostitis and to but two or three in which the cells were involved in the inflammatory process. Inflammations of the mastoid are usually secondary. In fact all of the cases personally seen were secondary to inflammatory process in the middle ear. The peculiar construction and the anatomical relations of the region favor the extension of the inflammatory process backward. The bony structure presents so many deviations, both in its interior and exterior structure, being in fact but a prolongation of the cavity of the middle ear, and its lining membrane a continuation of that of the middle ear, accounts in part for the liability of the extension of an inflammatory process from the middle ear to the mastoid.

As has been said, primary inflammations of the mastoid are certainly rare. Cases of such are, however, recorded, and are said to be the result of an injury or of an exposure to severe cold. A careful study of many such reported cases leads one to the belief that there had been previously a middle ear inflammation. The causes of mastoid inflammations are, cold, injudicious treatment of an inflammation of the middle ear, as by the use of hot vapors, poultices or fomentations, or the packing of an acute suppurative process by means of some impalpable powder. This

last is probably the most frequent cause, next to absolute neglect of the treatment.

The classic symptoms of a mastoid inflammation are pain, tenderness, swelling, and the altered position of the auricle. Associated with these symptoms are rigor, fever and restlessness, to be followed by somnolence. An early diagnosis of this condition is important, as a delay of the recognition of the true condition may allow of an extension of the disease to the brain. The symptoms and treatment of a mastoid periostitis does not seem to enter into this discussion, hence a brief allusion to its treatment is sufficient.

When the condition is recognized early, cold applications, persistently applied to the mastoid, should first be tried. It may be necessary to puncture the membrana tympani to permit of the ready escape of imprisoned pus. At least a thorough cleansing of the canal is required, in addition to a free and ready drainage. If relief is not afforded in twenty-four hours, a Wilde's incision should be performed. This should be an incision free and thorough down to and through the periosteum. The patient should be put to bed in a well ventilated room, and poultices applied to the wound in order to favor the suppuration.

When the Wilde incision fails to afford relief to the urgent symptoms, opening of the mastoid becomes necessary. The indications given for this operation are acute inflammation of the mastoid process with the retention of pus within the mastoid cells, when a permanent remission of the symptoms has not been brought about by Wilde's incision. The operation ought to be performed without waiting for the symptoms of cerebral irritation or pyæmia when there is recurrent swelling of the mastoid region which has undergone temporary recession, or has led to abscess formation with or without fistulous opening in the integument, even when no threatening symptoms exist at the time; or when after discharge of an abscess in the mastoid region, examination with the probe reveals a fistulous passage in the bone; or if with inflammatory processes in the ear, severe pain which resists all other treatment be present in the corresponding side of the head, even though no inflammatory appearances can be detected over the mastoid region.

The instruments needed are but few, but the operation should be performed under antiseptic precautions necessary to all surgical operations. The soft structures are divided down to the bone. Hemorrhage is controlled by pressure or torsion. The

bone is examined for any fistulous openings. If found, the opening should, of course, follow its course. The periosteum being divided, an opening into the bone is made by means of the chisel and hammer. This is carefully done, and as soon as spongy or carious matter is found, a sharp spoon should replace the chisel. During the course of the operation frequent explorations should be made with the probe. In other words, one should carefully feel his way, lest he break abruptly into the cranial cavity or injure the labyrinth or facial nerve.

The object is to establish a communication between the mastoid cells and the tympanum, consequently many operators advocate that the tympanum be freely opened previous to the mastoid operation. After the removal of the carious or spongy bone the cavity is washed with some antiseptic solution and dressed with the same care exercised in any other surgical procedure. Care is exercised that the wound is kept open and clean so long as suppuration continues. We can advocate the method of trephining to the dura mater. It appears to us, as an unwarranted procedure, unless we have evidences pointing to a meningeal abscess. The object to be attained by the operation described is the evacuation of pus. Opening into the brain cavity allows of the access of pus to that cavity, which is one of the primary objects we are attempting to avoid by the operation. Some operators use the trephine to break through the outer layer of bone. Should it be used, care should be exercised that we do not penetrate too deeply before resorting to the sharp spoon or gouge.

Briefly we have described the method we employ for mastoid operations. The recital of cases at this time is unnecessary, as it would be but a repetition of a paper presented to this Association at its meeting in 1900.

OPHTHALMOLOGICAL NOTES.

KENT O. FOLTZ, M. D., CINCINNATI, OHIO.

Difficulties in diagnosticating many eye diseases present themselves, and while in many cases the mistakes are due to carelessness, there are a number of diseases where a differential diagnosis is somewhat difficult. Every oculist has cases in consultation who state they have granulated lids. This has been told them in the majority of cases by some physician, who probably has given them treatment, and without relief. An examination may reveal simply a blepharitis, the conjunctival surface being as smooth as one could wish. Follicular conjunctivitis is often mistaken for trachoma, but it should be remembered that in follicular conjunctivitis it is the mucous follicles themselves that are affected, that no cicatricial changes result, and that nearly always the lower lid is the most affected.

Vernal Catarrh, Spring Conjunctivitis: This affects not only the lids, showing flattened elevated masses, but the conjunctiva of the eyeball is also more or less puffed, and the ring of raised tissue will often encroach upon the corneal surface. This disease also presents the peculiarity of being better in cold weather, reaching its maximum intensity, as a rule, during the hottest part of the summer season, then gradually subsides until the next spring.

Trachoma affects the upper lids more than the lower as a rule, is highly contagious, the trachomatous masses are between the follicles, and cicatricial changes always result, especially in neglected cases.

Another group of eye diseases that are often confounded comprises conjunctivitis, iritis and glaucoma. The injury done in many cases is irreparable, and yet a little care in making the diagnosis will reveal the nature of the disease in the majority of cases. It should not be necessary to mention these cases, as so much has been written about them, but a number of recent experiences illustrates the carelessness of diagnosis of many doctors.

Conjunctivitis: There is an increased discharge; the blood vessels are movable with the conjunctiva; there is often the sensation of a foreign body under the lids or upon the eyeball.

Vision as a rule is not impaired, and there is but little of light unless the cornea is implicated. Pupilary reaction normal.

Iritis: In the plastic type there is severe pain, worse at night and in damp weather; the severity of the pain increasing. There is a zone of redness surrounding the cornea, which is caused by injection of the deeper vessels. Usually the conjunctival vessels are not congested. The pupil does not respond to light, and when examined by artificial light there will usually be seen masses of plastic material at the pupillary margin. If a mydriatic is employed, the pupil will be irregular in shape, or may not dilate at all, especially if the amount of plastic material is excessive. The pupil is usually much contracted. Vision is considerably impaired, and in many cases there is dread of light.

Serous Iritis: This disease is more difficult to diagnosticate, as severe symptoms are often lacking. There is a very light pink zone surrounding the cornea in the majority of cases, but it may escape detection. There is generally a sense of discomfort in the eye, but not an acute pain. Vision is much impaired, sometimes nearly complete blindness resulting. Examination by oblique illumination will reveal a pyramidal shaped deposit of reddish dots on the posterior portion of the cornea, the apex toward the pupil. The iris is discolored, having a muddy appearance; as a rule it has the plastic form. The pupil is not as a rule contracted as in the plastic form, in some cases even being dilated.

Glaucoma: This disease as a rule comes on suddenly, although prodromal symptoms may have presented and have been overlooked. It often comes on during the early morning hours. There is often redness of the eyeball, but it is different from that of iritis or conjunctivitis. The pupil is usually dilated and more or less oval in shape. A greenish reflex may sometimes be noticed. There is sudden loss of vision, or at least much impairment. The pain is constant, and extends sometimes over the entire side of the head. The patient, when vision is not destroyed, complains of colored circles around and artificial light, and the characteristic symptoms of this disease is always present, that is, increased hardness of the eyeball. In doubtful cases the tension of the globe should always be taken, as it will tell very positively whether the diagnosis is correct or not.

ECHINACEA IN THE TREATMENT OF A CASE OF HYPOPYON KERATITIS OR INFECTED ULCERS OF THE CORNEA.

C. T. MILLER, M. D., ST. PAUL, MINN.

Infected ulcers of the cornea may be caused by the slightest abrasion of the corneal surface, and the way is open for the entrance of pneumococci, staphylococci, streptococci and other germs that may cause infection. It is quite certain that at times the conjunctival sac contains infectious material from diseases in the lachrymal apparatus. Yet the natural salt solution of the eyes (the tears) is sufficient to disinfect and wash out the germs so that infection takes place only when a traumatic lesion creates entering points for infection. Hypopyon keratitis includes the purulent ulcerations which occur in the course of gonorrhœal and diphtheritic conjunctivitis and in marasmatic infants. The complicating iritis is caused by toxins finding their way into the anterior chamber, just as atropine does, and setting up an inflammatory process. The prognosis in all forms of hypopyon keratitis is always grave, since the entire cornea is threatened with destruction, and may lead to total blindness if not promptly attended to. In most cases the general treatment does not have much effect. The chief thing is to disinfect the ulcer, which is best done by the actual cautery.

Case: Mr. P. H., a coal miner, aged 40, while mining December 25th, 1901, was struck in the left eye by a piece of coal; was treated by a physician, but came under my care January 11th, 1902, at which time he presented the following symptoms: Large central ulcer on the cornea over the lower pupillary region, with yellowish edges, hypopyon and iritis; has felt stabbing, burning pains, extending over the left temple and left side of the head, excessive lachrymation; the conjunctiva showed a high degree of œdema, increased tension, dimness of vision.

As the purulent inflammation increased, inflammatory swelling of the conjunctiva increased, involving the lids, with considerable yellowish discharge.

On January 12th the ulcer was thoroughly cauterized with the thermocautery. Protargol ten per cent and atropine were used until the 15th, when the hypopyon had increased and the

ulcer had enlarged. The thermocautery was again used, the cornea tapped and the hypopyon removed; the protagol and atropine was continued during the following ten days. Various remedies were given internally. While the ulcer did not extend, it continued to eat deeper, and resulted in the ulcer perforating the cornea with some prolapse of the iris, resulting in a fistula, which remained open during the following four weeks. The infection of the cornea still going on and the iritis also remaining, refusing to yield to the local and constitutional treatment, consisting of protargol, atropine, iodoform, etc., February 25th the patient was put on fluid extract of echinacea 15 drops every two hours. In forty-eight hours there was a marked improvement. The remedy was continued seven days, all the symptoms greatly improved, the corneal fistula still remaining open. The echinacea was then discontinued and the patient put on Howe's Iron. The improvement seemed to cease at once, and in a week's time I had the same trouble over again. The echinacea was then again administered in 20-drop doses for ten days, and, as before, with improvement in forty-eight hours. The echinacea was continued for two weeks, every two hours during the day, every five hours for two weeks longer. The fistula of the cornea having been cauterized with fused silver nitrate on the point of a pin, and treated with iodoform, had closed. The eye was at rest, all symptoms of inflammation had disappeared, some adhesions of the iris and a large leucoma remained, with considerable reduction of the vision.

Echinacea proved itself to be efficient in a high degree in this case, for as soon as it was discontinued the disease increased, and decreased as soon as it was resumed. It must, however, be in quite large and frequent doses of a good preparation of the fresh root, made by a reliable manufacturer.

I have repeatedly found it very useful in cases of purulent infection of the eyes.

MISCELLANEOUS PAPERS.

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SANITATION.

J. H. FOREST, M. D., MARION, IND.

The first sanitarian was the first person who began to fight dirt. In all probability this was a female. And while man has confined most of his work in this line to the laboratory and to experiment, woman has taken up the practical side of the question, and in the home to-day, by her cooking, scrubbing, washing and ironing, and her semi-annual outburst of house-cleaning, airing of bedclothes and wearing apparel, and the inculcation of the principles of cleanliness in children, has destroyed more microbes than all the products of the laboratories of the world. She may not realize the fact that she is a chemist, but the qualifications necessary to make a good cook (one that can prepare good, substantial and digestible meals) demonstrates that she is. She may not know just how many degrees of heat are required to destroy a given microbe, yet she boils the clothes and destroys many of them just the same, and is, therefore, unknown to herself, something of a bacteriologist. She lays no claims to being a sanitary scientist, yet it is she who usually sees that the bedroom window is pulled down and fresh air admitted at night. You might say that woman is an involuntary sanitarian, and to her efforts we owe more than an equal share of the progress made in sanitary science and hygiene.

Now, whether we go as far back in the past as the time when the savage removed the mud and hair from around that part of an animal carcass that he was to consume, or to the time when from an earthen vessel some one objected to the unclean

hands used in grabbing the half-cooked food therefrom, in either event, sanitary science had its beginning. When in the course of time and the evolution of humanity a forked instrument, a shell or paddle was used instead of the hands to feed one's self, a great step forward was taken. The use of individual instruments was only another step; then the cleansing of these instruments before re-using them marked another epoch in the evolution of this science.

When, in the primeval cave or hut, the inmates thereof began to separate themselves from the excretions and dirt, then began the science of sanitation. It is hard for us, even in imagination, to go back to the time when a mother, stirred by the spirit of evolution, proceeded to remove the dirt from the body of her child, or a little later, when she discovered that when the encrusted dirt was removed from the child's body that it was made to suffer by the presence of animal parasites. No doubt the poor mother was upbraided for the innovation and was forced by other members of the household to take the fond offspring out and apply mud all over its body so that in appearance and feeling he would resemble his associates. (It would be a queer coincidence if the mud bath of to-day was but a hereditary taint of a circumstance of this kind.)

Whenever or however the tendency of the human race was started in its fight against dirt, then was the real spirit of the science of sanitation begun. And from that day to this no better destroyer of germs has been found than cleanliness, fresh air and sunshine. There is a theory advanced by a well-known scientist that prior to the flood the world was enveloped in mist so that no direct rays of the sun reached the earth's surface, and that continuous twilight resulted. From this he argues that if there was no sunshine there could be no fermentation, and if no fermentation there could be no disease, and if no disease, the life of a human being might be prolonged for several centuries. Be this as it may, we do know that fresh air and sunshine are necessary for health and happiness.

The problem of the destruction of germs of disease is perhaps no harder for us in our day than the methods of destroying lice and the parasites that tormented the lives of our illustrious ancestors.

Hygiene is that science which tells us the conditions necessary to preserve health and to better our present conditions of living. Sanitary science tells us how to secure the conditions

which hygiene says are necessary to produce this result. For instance, hygiene teaches that a building or room of a given dimension must be supplied with a certain amount of pure fresh air if the inhabitants thereof are to enjoy the best conditions of health; then sanitary science offers the method of supplying the fresh air with a system of ventilation that will give the required amount.

If our knowledge of to-day was practically applied, a child would be ushered into this world with all precautions as to sanitary surroundings, the house would be constructed so that dampness and all the ills of improper construction would be avoided; the rooms where the child lived would be properly ventilated; the food would be pure; the water free from all disease germs; the schools and other places where the child must necessarily spend several years of its life could be made sanitary in every respect, and in addition all disease germs destroyed. If we would, at the present day we could to a great extent stamp out disease and make an almost perfect race of human beings.

To get at this matter in the most practical and methodical way it would perhaps be well to commence with the birth of the child. Let it come into the world under the best conditions of sanitary surroundings possible. Let its body be kept clean; its excretions destroyed by heat; its food pure and especially adapted to its particular age and avocation; its habitation properly located and constructed with due regard to ventilation and change of climatic conditions, and at death its body cremated, and the whole problem of the best attainable health of the race would be solved. This is a short story, and looks simple, yet it involves a revolution of society.

The first proposition, that of good sanitary surroundings at birth, has within the past few years made wonderful strides and improvement, and yet among a certain class of people it is still utterly impossible to bring about the desired conditions. It would seem that the most practical way of accomplishing the best results in this direction would be to have free compulsory lying-in hospitals, where proper attention could and would be given to those whose circumstances do not permit these conditions at their homes. Then we could, with some truth, say that all men were born free and equal.

The second proposition, that of cleanliness of the body, would carry with it cleanliness of the clothing for the body, for

the body cannot be kept clean if surrounded by soiled clothing. This would at once do away with the contamination that arises in crowded school rooms, street cars, churches, etc. This is a proposition which might be enforced.

The third proposition, that the excretions be destroyed by heat, is not at this time apparently practical. Our civilization of to-day seems to feel that a system of sewerage is sufficient for disposing of the major excreta, diluted to a great extent, and passed along for unfortunates to take up. Those secretions from the nose and mouth are simply sown broadcast all over the country, where they are taken up by unfortunate human beings whose physical condition is not strong enough to resist them, and who are by them destroyed.

While at this time it does not seem possible to destroy all the secretions by heat, might it not be practical to use chemicals to neutralize all the excretions of closets and then compel all sputum and excretions from mucus membranes to be destroyed instead of saving them in cuspidors to be emptied upon the ground, or on handkerchiefs, and through our laundries contaminating the whole community?

The fourth proposition is that of pure food and water. There is no excuse for impure water. Every municipality should be forced to furnish its citizens with pure water. Laboratories should be maintained, and all harmful adulterations of food should be determined, and every person who does so adulterate food should be punished for manslaughter.

The fifth proposition is perhaps the greatest of all. "Its habitation properly located and constructed with due regard to ventilation," etc. This includes all we know of sanitary construction of dwelling houses and all other buildings where people live, sleep and work, or congregate, as well as the plumbing, sewerage, lighting, heating and ventilation of the same.

Briefly described, a residence should be erected upon an elevated piece of ground. It should have a cement basement under the whole building, which should extend far enough above the surface of the ground to have good ventilation. A tile drain should surround the foundation so as to keep the basement perfectly dry. There should be plenty of windows, and these to extend well up to the ceiling. Double windows for northern latitudes are better for winter, as by these fresh air can be admitted without drafts. The house should be heated by a furnace, with a sufficient quantity of pure, cool air from outside being

heated and forced to all parts of the building. Deep well water should be used and provisions made for any amount required. Bathrooms and closets should be so situated that they have plenty of space and light, and all of the plumbing should be exposed. Add to this that all sewer pipes from sinks, closets and tubs be kept clean and disinfectants be frequently used, and you have about the best that can be had in the way of a sanitary home of the times.

The same general provisions for schools, churches and other public building should be adopted, with the provision as to schools, at least, that all children should be compelled to take frequent baths, which would perhaps mean public baths in connection with the schools.

It may be inferred that the views expressed in this paper are theoretical and more or less impractical. I will, therefore, in concluding, call your attention to some facts which, while they may not all be classed under the head of sanitary science, go hand in hand with it, so far as the relation of the physician to the public is concerned.

I would first speak of the subject of tuberculosis, the "great white plague" of our day. It should be the duty of every practitioner to instruct all of his patients to destroy the sputum of all suspected cases of tuberculosis. This can be most readily done by burning up all expectorations. The excretions in typhoid fever should also be burned; but should this means not be available, they should be buried with quicklime or subjected to strong solutions of permanganate of potassium of formaldahyde. The greatest care should also be exercised in scarlet fever, diphtheria and smallpox, where all discharges, membranes or scabs should be subjected to the same treatment for their destruction. Antitoxin as a preventive of diphtheria to those known to be exposed to the disease, should be recommended with the same assurance of immunizing as in vaccination in smallpox.

As a disinfectant we have in formaldehyde a product that is far superior to anything heretofore known, and a proper and liberal application of it in any of the above mentioned diseases insures the destruction of any microbes that might be lingering around the rooms where such diseases have occurred. By the physician instructing his patients along these lines he can to a great extent counteract many of the tendencies toward disease and add much to the health, happiness and longevity of the human race.

OBSCURE TYPHOID POLLUTION OF WATER.

G. G. WINTER, M. D., SHELBYVILLE, IND.

On the 17th day of December, 1901, I was called by telephone eight miles from my offiec to see a farmer "who was not quite sick, yet fully unable to do his work." At my arrival I found a little child, about six years old, in bed suffering with well pronounced typhoid fever and having been under the care of a physician for nearly four weeks. The family being dissatisfied with the treatment, and the father having felt uncomfortable for about two weeks, with languor, debility, and soreness in the limbs, especially in the joints of the legs, the same symptoms with which the little girl had commenced, had paid off the physician and sent for me.

The doctor had given as the cause of the fever the water of a spring about twenty rods from the house in a southeasterly direction, which by being partly stopped up was exhaling not the very best of odor.

I examined the water carefully, but was unable to detect either the typhoid bacillus or even any trace of animal decomposition. The spring, besides, had not been used for drinking or cooking purposes for years, and the water supply was coming from a well, driven into solid rock, about thirty-eight feet deep. This water, I thought, clear as crystal, cold and sparkling, could by no means furnish the cause of the disease. I nevertheless took some of it with me to have it undergo a critical examination, when, to my greatest surprise, I found it swarming with fatal bacilli. Where did they come from? No typhoid fever in the neighborhood for several years; no possibility of contamination of the well from its surroundings, as the pipe is fitting closely to the hole drilled in the rock, and an iron trough receives the surplus of water pumped and leads it through lead pipes to a nearby branch; no smell, no taste, no color ever indicated any impurity. All my questions in regard to the matter brought negative answers. It was a mystery to me, and although I prohibited any and all use of this water immediately, it had already done its work, and the whole family, seven persons, with the only exception of the mother, was down with the fever inside of a week. Let me say here that all recovered, though

some were quite sick. Now, where was the source of pollution.

By and by I found out typhoid fever had been epidemic in the neighborhood about four years ago, yet the excrements of the sufferers on this farm had been buried not less than eighty feet from the site of the pump in a northwesterly direction. I then made a kind of survey of the whole vicinity, and soon learned that in the preceding October the water course of a spring on an adjacent farm had been changed and that the water was disappearing from the surface about 100 to 120 feet from the place where the feces of typhoid fever patients had been put into the ground four years before this outbreak.

The question is now, could this water soaking into the ground have passed the contaminated soil, taken up the bacilli and, becoming connected in some manner with the supply of the well, carried them thither and so have caused the disease?

This is my opinion; and in order to determine the truth of it I have ordered that the former watercourse of that spring be reëstablished and the water of the well pumped out daily, and shall try by repeated examinations to ascertain whether hereby the number of these micro-organisms will be diminished respectively and how long it will take until the last trace of them can there be found.

SENILITY AND ITS HYGIENE.

HERBERT T. WEBSTER, M. D., SAN FRANCISCO, CAL.

Like all other organized forms, the human body has its period of growth and development, its period of prime, and its time of decay and senility. No exact age can be stated at which the bodily powers begin to decline, for this varies greatly in different individuals. Some persons are older at thirty, as concerns the condition of bodily vigor and prospects of longevity, than others at fifty. It has been not inaptly remarked that "a man is as old as his arteries," for the condition of the circulatory system, upon which depends the nourishment of the tissues, decides, barring wasting and malignant disease and accidents, almost completely the prolongation of life. With some, atheromatous conditions appear at an early age, and vital organs are then liable to suffer irremediable damage from impoverishment

of blood supply; though atheroma may exist for years without involving parts necessary to life.

Abbreviation of youthful vigor, however, may depend upon failure of a single organ instead of a simultaneous degeneration of all the bodily tissues, as occurs in a few exceptional cases of advanced life. Even in extreme old age, euthanasia seldom happens, a fatal affection of some one vital organ finally ending the scene in most cases of death in elderly people. On this subject Prof. H. C. Wood remarks:

"Excessive strength in one part is a veritable source of danger. The athlete perishes because his overdeveloped muscular system perpetually strains and finally wears out a heart or a lung that was originally constructed for a muscular apparatus of half the power of that which he has artificially built up. The larger portion of mankind die early on account of some local weakness. It ought to be generally recognized that human age is not to be counted by years, and that in some constitutions the general tissues are older at fifty than they are in other individuals at one hundred. Many of the cases of so-called neurasthenia, or nervous exhaustion, of men and women suddenly or gradually breaking down at forty or fifty, ostensibly from overwork, are really cases of premature old age, and are to be nursed and treated precisely as other individuals would be who had reached to fourscore years. Moreover, a large proportion of early deaths are the result of some vital organ being originally endowed with a longevity less than that of the rest of the organism. The reason that consumption is so often utterly irremediable is to be found in the fact that in not a few cases the lung has reached its allotted term of days, and must die because its vitality is exhausted. If an eye, or other not vital part, fails from lack of vital power, the man exists; but if a lung dies, he perishes."

With all the bodily organs in fair condition, few begin to realize the disadvantages of age before fifty. Probably prior to that time the eyes have evinced an inability to adapt themselves to fine print, and glasses may be required for a long time before to compensate rigidity of the ocular structures due to encroaching senile change. At fifty the muscles may be noticed to have become less supple than formerly; the subject stumbles easily, especially in the dark, is less sure of his footsteps in ascending elevations, and feels less confidence in attempting any kind of unusual physical effort than in his younger days.

The most common malady of senility in men, after ocular

deficiencies, is that due to atheromatous states about the prostate gland. Urinary difficulties, such as retention, dysuria, etc., are common troubles with such subjects, and aggravation upon slight provocation is liable to arise. The prostatic urethra becomes tortuous from fibroid changes in the surrounding structures, and the most careful introduction of a hard catheter may now be attended by injury to the passage, or followed by septic fever. As time advances, ammoniacal decomposition of retained urine may render this element of senility a source of extreme discomfort. Sexual debility also appears in a large number of cases, impotency frequently attending, or else the act of coition, especially if frequently repeated, is attended by pain, or leaves behind aching of the testes or penis, burning of the urethra, vesical tenesmus, or other discomfort. The bane of advanced life in the male, in many cases, is difficulty of this kind, which, except in a few rare instances, can at most be but temporarily palliated.

In women, degenerative changes frequently involve the uterus, ovaries and vagina, and, if these be not malignant, subacute inflammatory changes, terminate in atrophy of the organs, with the result that the vagina becomes dry, sensitive and shrunken, its lumen contracted and the urethra irritable, entailing years of urinary discomfort.

But local degeneration of this character is by no means the only change which has been going on. General atrophy of all the tissues has now set in, though perhaps yet in its incipiency. The muscular system generally begins to lose its elasticity, the muscular supply to the organs of digestion and other vital parts largely participating.

Heredity is supposed to greatly influence the early or late approach of senility. Undoubtedly this is a potent factor, for the parent hands down peculiarities to the child, weaknesses as well as virtues; but we have a notable example in the case of Cornaro of the fact that circumstances may alter the tendencies of heredity, so that life may be prolonged much beyond the average space in those in whom natural advantages seem opposed to a good old age. Undoubtedly proper attention to hygiene will frequently enable individuals of delicate constitution and hereditary disadvantages to live comfortably more than the allotted threescore and ten. It is worth something to know one's weakness be able to guard against it.

Notable exceptions have occurred in which senility has been spontaneously postponed far beyond the ordinary period. A his-

torical instance of this kind is that of Carbajal, the lieutenant of Gonzalo Pizarro during his rebellion against the Spanish government in Peru after the subjugation of the Incas. When Carbajal was in his eighty-third year he won the bloody battle of Huarina, after his superior officer, who commanded the horse, was routed and his force all but annihilated. Against superior numbers he made a stubborn and well-directed stand before an apparently victorious foe flushed with transient victory, and finally routed and put his forces to flight. Himself strong and active, brave and determined, he inspired his men with his own daring and valor, and converted a pending defeat into a signal victory.

"Francisco de Carbajal," says Prescott in his Conquest of Peru, "was one of the most extraordinary characters of these dark and turbulent times; the more extraordinary for his age; for at the period of his death he was in his eighty-fourth year—an age when bodily powers and, fortunately, the passions, are usually blunted; when, in the witty words of the French moralist, 'we flatter ourselves we are leaving our vices, whereas it is our vices that are leaving us.' But the fires of youth glowed fierce and unquenchable in the bosom of Carbajal. Prompt, active and persevering, he was insensible to fatigue, and, after days spent in the saddle, seemed to attach little value to the luxury of a bed. He knew familiarly every mountain pass, and such were the sagacity and the resources displayed in his roving expeditions that he was vulgarly believed to be attended by a 'familiar.' With a character so extraordinary, with powers prolonged so far beyond the usual term of humanity, and passions so fierce, it was not surprising that many fabulous stories should be eagerly circulated respecting him, and that Carbajal should be clothed with mysterious terrors as a sort of supernatural being —the demon of the Andes."

The following year Pizarro's army was routed by the royal forces at Xaquixaguna, Carbajal was captured through a fall of his horse and the treachery of his own men, and he was tried, and sentenced to be beheaded and quartered. This sentence he met with the fortitude of a strong man, sneering at the holy fathers who held the crucifix before his eyes on the way to the block, and scoffing at his executioners at the last moment.

Undoubtedly Carbajal inherited a robust constitution, for he was of large size and of powerful frame. For fifty years he had endured the toil and turmoil of war, and yet, far from being

old and decrepit at eighty-four, he was active, fierce and aggressive. With a carefully spent old age, there is no telling to what his life might have endured. Probably he might have lived to a greater age than that of the Indian who died in Monterey county, California, a few years ago, more than one hundred and fifty years old.

Of a different kind of vital tendency was that of Lodovico Cornaro. In the first place, Cornaro was of delicate constitution from birth. His family were not physically robust, and he pursued excesses from the age of eighteen to thirty-five which would have undermined the most powerful constitution. From thirty-five to forty he was an invalid and constant sufferer from disease, so much so that his physicians informed him, when he was forty, that he had not more than two or three years more to live, but that what life remained to him might be made more endurable if he would adopt temperate habits. Certainly there could not be a more surprising example of recovery than his, when we consider his inherited weaknesses and the excesses he had indulged in. Hygienic measures, however, adopted at forty, carried him to the age of a centenarian, and enabled him to pass the last years of his life in comparative comfort.

At forty, Cornaro began gradually to reduce the quantity of food he took each day, till at length he consumed only what nature absolutely required. He tells us that at first he found this severe regimen disagreeable, and confessed that he "relapsed from time to time to the flesh-pots of Egypt." But by resuming his efforts after each failure he succeeded in less than a year in adopting permanently a spare and moderate system of alimentation. By the time this was accomplished his health was completely restored, and he had become so enthusiastic upon the results that he determined to proceed further in his researches into the effects upon his own system of an abstemious diet. Up to this time he had only followed the counsels of his physicians, but he now ventured upon trials of his own as to the amount of food absolutely necessary to sustain life. The results were surprising, for he found that he was enabled to so reduce his allowance that the yolk of a single egg would suffice for a meal. Upon other occasions a crust of dry bread afforded him more gastronomical comfort than he had ever experienced during his life of excesses in the consumption of the most exquisite dainties.

This abstemious course proved conducive in every way to health and comfort. Not only did his bodily ills entirely dis-

appear, but his spirits, which had before been depressed, now became buoyant. He conceived a taste for the noble and beautiful and artistic and literary pursuits, the contemplation of fine scenery, noble buildings, beautiful combinations of color and sweet music attracted and charmed his senses where they had formerly possessed no power of allurement.

Cornaro's abstinence consisted in a reduction of both solid and liquid food, and when he was within two years of fourscore his daily allowance was limited to twelve ounces per day of solid food, consisting of stale bread, light meat and the yolk of an egg. Of liquids, besides pure water, he took fourteen ounces of light wine. This diet was divided into four meals per diem, so that each averaged three ounces of solid food and about three and a half ounces of wine.

Upon being urged by his medical advisers to increase the amount of his daily allowance he yielded for a time, but found upon doing so that his vivacity was destroyed and that he was becoming peevish and melancholy. In this connection it is to be remembered that Cornaro possessed a highly sensitive organization, and that the two ounces each per diem of additional solid and liquid food indulged in during such trial probably exerted more influence than it would have upon an ordinary individual.

The improvement in spirits and bodily comfort liable to arise from the adoption of an abstemious diet, however, are not all the benefits likely to follow upon the change. The case of Thomas Wood, otherwise known as "the abstemious miller," is an illustration that a spare diet will even result in additional muscular power, for Wood at the age of fifty was enabled to carry a weight of a quarter of a ton, whereas at the age of thirty, before he began habits of moderate living, he had not been able to accomplish so much. Wood began a course of dieting through reading Cornaro's work, "A Sure Way of Prolonging Life," for the relief of corpulency, attended by violent attacks of gout and rheumatism, and soon found his health established, his spirits lively, and his sleep no longer disturbed by frightful dreams. He lost about one hundred and fifty pounds of his corpulency, and, as already stated, improved in muscular power and endurance. Instead of being satisfied with carrying out Cornaro's regimen, however, he proceeded to absurd extremes of abstinence, and absolutely lived the last sixteen years of his life entirely without liquid food. He did not reach a remarkable longevity, but probably lived to a greater age than if he had not adopted Cornaro's hints. Pos-

sibly the extreme to which he carried his experiment in later years may have otherwise conspired to somewhat shorten his days.

An illustration of the vitality built up by Cornaro's regime occurred during the seventy-first year of his life; for at that time he met with a terrible accident, in which his head and body were fearfully battered and his arm and leg dislocated. At such an age we would ordinarily expect a fatal result from so severe an accident, and, indeed, Cornaro's physicians pronounced his injuries fatal; but he recovered rapidly, almost without medical treatment, and without febrile symptoms.

At the age of eighty-three Cornaro wrote his treatise on "The Advantage of a Temperate Life." In later years he added three other discourses on the same subject. His last one was written in his ninety-fifth year, and he asserts that he is still in possession of health and vigor and in perfect command of all his faculties. Authorities differ as to the exact age which Cornaro finally reached. Some state that he lived to one hundred and four; others that he died in his hundredth year.

It is rational to believe, from these observations, that more than enough food for the active needs of the body must be detrimental. After the tissue demands have been met, a surplus must be a burden to be removed by the emunctories, especially by the kidneys. How common it is for big eaters to sicken and die within short notice, soon after the prime of life is past, with Bright's disease. The infallible results of excessive alimentation must finally be failure of some vital organ. If the kidneys are equal to the burden, the heart or arterial system is liable to fail. Atheromatous conditions, especially when the end arteries at the base of the brain are involved in miliary aneurisms, are liable to result in fatal apoplexy at any moment.

Barring apoplectic conditions and cerebral softening, the mind usually endures after the physical functions have passed into advanced senility. Indeed, the mental faculties frequently endure into extreme old age, and by that time the mind has garnered up rich stores of experience and accumulated knowledge, which may be of avail during the last years of life, when physical incompetency might otherwise be a source of despondency, and afford comfort and solace during declining age. Milton was near sixty when he wrote *Paradise Lost*, and after that time some of his best literary work was accomplished. Longfellow achieved his best productions after the age of eighty.

Horace Greeley was in his intellectual prime at 60. Lord Palmerston and Gladstone afford examples of vigorous mentality at 80.

To the true philosopher this fact is a source of much satisfaction. Physically, the young are more attractive than the aged, and receive the most attention from the busy world. When one becomes old, if he possesses not high mental qualities to render him congenial and prominent as a social factor, he is liable to be slighted and passed coldly by for those who are more actively in the race of life. He is elbowed carelessly aside to make room for those who are supposed to have a future before them. Only immense wealth can command for him the patronage of the vulgar crowd, unless he possesses remarkable ability and endowment. There is the consolation, however, for one with ripe experience and trained mental faculties, that he may so pass his declining years in the study and contemplation of the noble, useful and beautiful, through his acquaintance with books, his past experience and his ripe powers of observation, that life, instead of being a burden to himself during his latest years, may be even more enjoyable than were the shallow days of his callow youth, and a green old age may prove the most useful and enjoyable period of all his experience.

How can a man reach a comfortable and happy old age? It seems as though Cornaro has come very near to instructing us on the subject. If ever there was occasion for an old age to be filled with gloomy regrets, Cornaro's was one. He was a noble by birth, and so high that some of his family had been among the doges of the once great republic of Venice; but through some dishonesty of his relatives his rank was taken from him, and he was virtually banished to Padua. Here he ended his days, but not in sorrow and vain regrets. His mode of living imparted content and buoyancy in his mind, and he employed his time, when age had dulled the faculties of those who banished him, in imparting precepts and example to posterity that have outlived the names of those who sat upon him in judgment, and he has left a fame behind which shines in the annals of history after theirs have been swallowed up in oblivion. "To live a hundred years" has been the lesson he has taught, if those who follow him will heed well his precepts.

To sum it up in a single word, the hygiene of old age is *moderation*. Moderation in eating, drinking, in sexual matters, in exercise, and emotional excitement. Aged men should abandon the cares of business; the mental stress attending many of the

occasions of suspense during an active business and the worry of petty affairs connected with many avocations should be avoided by those in advanced years. A modest competence should satisfy if fortune has not smiled during early and middle business life, for the actual needs of a modest old age are few, and those who come after should be supposed, under ordinary circumstances, to be as able as their predecessors in providing for their own wants. If the aged have been able to accumulate sufficient to provide for simple needs during their last years, they should be content to withdraw from the arena of active life and forever leave business cares to the younger element.

It is but natural that the sexual capacities should fail before other powers become impaired, for no other organs of the body are usually subjected to such abuse as these during early and middle life, and a candle cannot be expected to burn at both ends. Prostatic disturbances may be much ameliorated by careful habits of diet—abstemiousness—though unquestionably they may be additionally benefited by proper medical and surgical measures. Cornaro's early maladies may or may not have partaken in part of these, but the natural supposition, considering the fact that he had early been given to various excesses, is that they did.

There are anatomical and physiological reasons why the diet of the old should be of different character from that of youth. "The capacity to take exercise or undergo fatigue," says Fothergill, "is impaired, and the inclination to do so is also lessened. A man pleads 'he is not so young as he once was.' His limbs are stiffer and his wind is not so good. Some certainly retain their vigor till a very old age, and with it their digestion and their gastronomic ardor. In my days of early practice in the north of England there was an old gentleman of the old school and the habits and practices of the Regency. From early morn till dewy eve he sturdily walked throughout the day in order that he might enjoy his late dinner. His belly was his god, and he was an earnest, faithful worshipper. It was not a lofty creed, but it could inspire conduct—and that is the highest terrestial effect of a creed. He walked, he ate—and, what is more, he ate with impunity—and died a nonogenarian. After all, it was a piteous sight to see the old patrician tramping along in all weathers with his dinner before him—an object, however, which could lure him to undergo all the inconveniences of exposure to bad weather in a tempestuous locality. His ambition, such as it was, was gratified."

How much better, however, had it been to have adopted the diet to the condition of the body needs than to have created an artificial digestion by uncalled-for labor. Instead of toiling, and thus taxing the body to digest a generous meal, how much better to have taken a limited quantity of aliment—but an amount sufficient to provide for the leisure habits of a ripe old age—and remained by the fireside in comfort. It illustrates, however, the amount of sacrifice that many individuals will undergo for the pleasure of distending their stomachs.

The stomach and intestines participate in the general wasting which occurs as a result of senility. Their glandular supply atrophies, and many of the glands disappear entirely. Wasting of the tunics is a prominent feature, especially in the duodenum, jejunum and ileum, though the structures of the lower bowel may become somewhat thickened. To such a degree does attenuation of the walls of the small intestine arrive that its contents may be readily seen through the transparent tissue. The teeth failing in most instances, natural inability to digest and appropriate the diet proper for young persons is clearly appreciated. Indeed, the taking by the aged of large meals, consisting of strong meat and other food for the robust in active habits, is a matter fraught with danger, as many a case of sudden death among them after such indiscretion has proven.

Extremes of heat and cold are also to be dreaded and avoided by those advanced in age. Fatal pneumonia frequently carries off aged persons, from an exposure from which those of middle or early adult life would not suffer much inconvenience; and exposure to extreme heat is also particularly hazardous. Avoidance of extremes of temperature, therefore, is nearly if not quite as important as of indiscretions in diet.

It is interesting and instructive in this connection to examine the records of those who have reached an age of a hundred years. Those of fifty-two centenarians collected by the British Medical Association show that thirty-six were women, suggesting that less exposure to accident and temperature vicissitudes and more moderation in eating and drinking have left their effects in disproportionate longevity. Freedom from the heart-burnings of ambition and bread-winning may also be suggested as a factor of no little moment. An inherent vitality in favor of women also doubtless contributes something toward their advantage. Of the sixteen men, only one was single, while of the thirty-two women, ten were unmarried.

"Three of the fifty-two," says Proctor, "were rich, nineteen poor, the rest in comfortable circumstances; nine were fat (only one man), twenty-three lean, eighteen medium; only eight were full-blooded, the rest average or pale. Forty had good digestion, which after one hundred years means a good deal. Most of the fifty-two had good appetites, only two having appetites classed as actually bad; most of them had been through life moderate eaters; twelve, however, had eaten large quantities of food. Only one was returned as a large eater of flesh food, and only one as a great consumer of alcoholic liquors (in his case the drink preferred was beer). Only eight of all the number were classified as simply 'irritable,' but to these must be added five classed as 'irritable and energetic.'

"As to smoking, thirty-two were non-smokers, seventeen smoked much (four of them being women), three moderately, and two a little; only one chewed; thirty-seven avoided snuff. Most of the remaining returns, relating only to the actual condition of the fifty-two centenarians, at present are of no special interest, showing only that the same weaknesses prevailed, in almost the same degree, among them, as we might expect to find among as many men and women of the average sort, between seventy and eighty years old. If only our fifty-two centenarians could have been examined twenty years ago, in these respects, the world might have obtained some useful hints. It is worthy of notice, however, that most of them were free from rheumatic and gouty troubles. The only man whose joints were stiff or deformed from such causes stated in reply to questions as to his capacity and taste for drink: 'I always drank as much as I could, and I always will'—not a case, it will be observed, of 'Willful will to water so Willful must wet," but Willful would not to water and so wet his whistle to his own discomfort.

"When we take a number of cases such as these, in all classes of life, under many varied circumstances, and not characterized by any special course directed toward the attainment of mere longevity (which might possible be gained without any real advantage, all that makes life worth living being sacrificed for life's mere sake), most men not affected by specific disease, constitutional or inherited, may hope to attain to an age considerably exceeding threescore years and ten, or even fourscore years. It would appear, in fact, as though five score years were the natural or normal limit of human life, and that when men

die many years before that age is attained, the fault, apart from malignant disease or accident, has lain with themselves.

Underlying the old proverb, 'Every man is a fool or a physician at forty,' there is an important truth that it is in every man's power, if he is wise, to recognize early in life the requirements of his own constitution and the means by which all such stores of vitality as it may possess may be utilized. An able physician said to me a short time ago: 'In all my experience I have never known but one man who really died a natural death,' and he went on to explain that a man can only be said to die a natural death when he dies all at once—when the organs on which circulation, respiration and nutrition all depend all fail at the same time; whereas one man dies because circulation fails, another because the respiratory organs give out, and yet another because stomach, liver, kidneys or bowels become unequal to their work. In fine, the secret of longevity lies in the attainment of a natural life, to be brought to an end by a natural death; and nearly every man, did he but give his vital powers fair chances, would find that, like—

> '"The wonderful one-hoss shay,
> He was built in such a logical way,
> As to run a hundred years to a day,
> And then of a sudden to pass away.'"

Recapitulation: The body-tissues of the aged undergo atrophy, and if they were capable of appropriating the amount of nourishment necessary for the strong and active frame of middle age or the growing period of youth, they do not require it. Nourishment taken when not required by the body is an unnecessary burden to digestion and to the system after it has entered the circulation. What is not then assimilated becomes so much driftwood, to tax the powers of the body for its elimination. Such material repeatedly and repeatedly entering the circulation finally seriously taxes the organs of elimination so severely as to result in failure of their functions and structural changes in their tissues. The kidneys receive the burden of such indiscretion, and are apt to finally give way. Or, if these prove capable of enduring the burden, atheroma, valvular heart disease, lithæmia, gout, or chronic rheumatism will be liable to result.

If the system were able to appropriate an abundance of aliment, the atrophy which affects the glandular and muscular

structures of the stomach and intestines incapacitates these organs for properly digesting a large amount. The teeth of the aged are also liable to be defective, so the natural conditions are opposed to a strong diet as well as a liberal one. However, in these days of dental qualifications, a tolerable substitute may be provided for defective mastication.

Fullness of the circulatory system—distention of the arteries—beyond a moderate degree tends to the production of atheroma, and in the aged who are able to appropriate a generous diet, atheromatous conditions are more liable to arise than in younger subjects. A moderate diet—what would ordinarily be considered an abstemious course—should therefore be adhered to by the aged, if proper physical and mental capacity be expected to endure. Red meat and other articles difficult of mastication and digestion should be dispensed with as a rule; when employed as a diet by the aged, red meats should be minced and afterward thoroughly cooked, though they are better dispensed with entirely.

A warm climate is most appropriate for old age. Senile subjects are more susceptible to cold than those in vigorous life, for their heat-making functions have been impaired by age. If a cold climate during the winter is to be endured by an elderly person, extra warm clothing should be provided, and, in addition to this, an undergarment of extra heat-retaining quality should be worn. This ought to consist of buckskin or chamois skin, perforated to permit of evaporation of surface moisture. The rooms of such individuals should be steam-heated, in order that an even temperature day and night may be maintained. A better provision would be the migration of such persons to a mild climate at the approach of winter weather. Of course the writer realizes that it is not always possible for such provisions as these to be carried out, for not every aged person possesses the means to thus provide for himself. However, the intention here is to set up a standard to be approached as near as possible.

Mental worry and shock should be spared the aged so far as possible, for capacity to endure such trial diminishes with accumulating years in most elderly persons. Sudden shock may kill such an individual as suddenly as a bullet or fatal concussion. Extreme physicial exertion is also hazardous; a sudden dash after a train may result in death on the way, due to giving out of some attenuated tissue in a vital part.

The use of alcoholics by old people is a matter which has

been discussed *pro* and *con* by the medical profession for many years. Certainly, if alcoholics are to be commended for any class of people, they are better for the aged than for the young, for habits of intemperance are not so liable to be engendered by their use when begun at a late period of life. However, it is a question whether there is any good in artificial stimulation at all, except, perhaps, for temporary purposes, in extreme cases. If stimulants for general tonic purposes are to be employed by the aged, they should consist of light wines, moderately used, as illustrated by Cornaro. Here it is to be remembered that Cornaro was an Italian, and prone to the custom of his countrymen, who usually regard wine as a beverage at meals with favor. Pure water does as well in the long run, and is as conducive to health and longevity, if not more so, than any form of spirituous liquor. If objection to cold drink be made, hot water may take its place, and prove as stimulating as wine in the long run, seeing that there is no secondary depression to follow.

However, it is best to dispense with the idea that as bland a fluid as pure water is harmless when taken in unlimited quantity. The practice of abstaining from much solid food and taking freely of liquids is nearly if not quite as injurious as gorging with solid food. To take a dinner which is provided with soup, wine and a cup of tea or coffee at the wind-up, if the liquids be largely consumed, even though the amount of solid food be limited, is to abnormally distend the arterial system; and when this is repeated several times daily there must be a constant burden thrown upon the heart, arteries and kidneys, unless profuse perspiration attend, as occurs in sultry weather in some climates. That such habits are innocent, so far as their effect upon the system is concerned, is certainly a mistaken idea. A person can drink too much of as even as simple an article as pure water. It might shock some people, who look with horror upon the use of alcoholic drinks, to have it asserted that they themselves are intemperate; but if they habitually consume large quantities of water, whether hot or cold, they are certainly not temperate in their habits, nor following a course conducive to longevity or a comfortable old age.

Finally, a remark or two on the subject of tobacco may not be amiss. Undoubtedly tobacco, when indulged in with caution, may often prove a source of comfort; for it calms and exhilerates at the same time, improves intestinal peristaltic action and enhances for a time the flow of spirits. That it is a deadly

poison, however, no one will deny. Referring again to the records of the fifty-two centenarians preserved by the British Medical Association, we find that the majority of them were non-users of the weed. It is not to be forgotten that tobacco paralyzes the motor nerves, progressively, from the periphery toward the central organs, specifically disturbs cardiac function, and sometimes produces total blindness through its specific action on the retina; and its debilitating influence on the nervous system is believed to beget an appetite for alcoholic drink to supply a craving for stimulant. To say the least of it, then, moderation in the use of this narcotic is as important as in other habits during senile life, when all the recuperative powers are less resilient than in younger days.

THE PHYSICIAN AND HIS METHODS.

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From the earliest time of which we have any record man has been the victim of disease and death. The constant transgression of law has produced its evil effects. These violations of natural law have resulted in departure from the normal condition, or health, to the abnormal, which we term disease. Just as there has always been a time when disease was more or less prevalent, so there has never existed a moment when man has not arrayed himself against the results of outraged Nature and endeavored, by his incantations, his drugs, and his knowledge, to wrest from her hands the penalties of his disobedience.

The physician, then, in the sense that he was pitted against the disobedience of his fellow-men, has existed since the commencement of conscious life upon this terrestial planet. Since those remote times his methods have been constantly changing, and have advanced with civilization.

Possibly the title could be extended with advantage so as to read "The Eclectic Physician and His Methods of Curing Disease," as this is in reality the subject to which I desire to call your attention at this time.

Just a few remarks as to what a physician should be, and they apply to all practitioners of medicine, as well as to those who have gathered themselves under the banner of Eclecticism. He should be a true man, strong in his intellectuality, his sym-

pathy and his morality. Intellectuality is the most prominent requirement of the successful physician. Now, more than ever before, it is necessary to be able to use the instruction, the keen perception and the wisdom of research in order to battle victoriously against the insidious inroads of the hydraheaded monster—disease. Each generation is more highly civilized than its predecessors. For this advance we must pay the penalty. This is manifested in the more subtle form of disease expression. Hence intellectuality must predominate in the physician who wins the encomiums of cured patients.

Sympathy is closely allied with intellectuality in its usefulness to the practising physician. The aim of the doctor—the true doctor—is to cure his patients as quickly as possible, and by those means which are most pleasant. Sympathy is that quality which enables us to bind our fellow beings to ourselves. Sympathy is the father of faith. Faith is the one important ingredient which must always be mixed with our prescriptions, if we are to be successful relievers of disease. Hence sympathy is absolutely essential to victory in the realms of medicine.

Morality is that part of our nature which wins the respect of our fellows. It is the keystone to a man's character, that binds and holds all else to its place. True morality is best exemplified by following the two commandments of the Great Teacher: Whoso loves God with his whole heart and his neighbor as himself will perforce be a man who will secure the commendations of those with whom he is associated.

The physician should be an optimist. He should believe in himself and in the means which he uses to alleviate or eradicate disease. Of all men in the varied conditions of life, the physician should be optimistic in his views and his actions. A bright, cheery face, a pleasant word and an assuring manner will act upon the suffering sick as the sunshine and shower upon the earth's vegetation.

If there is any man who should thoroughly believe in himself it is the physician. If he does not feel that his conclusions are right, how can he expect those who hear them to believe? While arrogance and ostentation are despicable, yet a kind firmness in expressing his opinions is indispensable to his success and his patients' welfare.

Physicians are dealing with vital forces. Many of their weapons are pregnant with good or evil, according as they are skillfully or wrongly applied. This is a fact which all admit.

Hence that man who prescribes medicine whose action he has no faith in is decidedly culpable.

We are living in an age of precision in all branches of science. This is more true of the practice of medicine to-day than it ever was before in the world's history. We are giving stronger medicine, in smaller doses, for their direct effects; and we are getting results that would startle the educated physician of a century ago. This is especially true of those who practice "Eclectic medicine." This may seem, to some, a strong statement, but what follows, I trust, will substantiate its correctness.

Naturally comes the first question, what is Eclectic medicine, and in what does it differ from that of the other schools? This is a pertinent query, and should receive a well-considered reply. Some have very foolishly adopted the meaning of the term Eclectic—this is largely true of our competitors—and have applied that to the Eclectic system of practice. The dictionary definition of the word Eclectic is, "one who believes in or practices selections from all systems, or sources, especially in philosophy or in medicine." This is absolutely false as applied to Eclectic medicine, and if it is all that the Eclectic practice has to demonstrate its claims, the sooner it is buried in oblivion the better for all concerned. The fathers of Eclectic medicine—or what, to my mind, is the better term, the American practice of medicine—grasped a truth that is as undying as the fact that matter cannot be obliterated. They believed, and forcibly stated such belief, that disease was an expression of impaired life, that such a departure might be manifested in one of three ways, an excess, a defect, or a perversion, and that the physician's duty was to refrain from administering any form of medication which would have a tendency to continue to increase the wrong already established. They were not only to abstain from that which was hurtful, but they were to assist nature, in all ways, to eliminate the cause which was producing the defect, and aid in reëstablishing the normal condition of health.

Such, then, was the foundation upon which the structure of Eclectic medicine was commenced. Upon this base was placed the fact that the earth, in its vegetable productions, had stored up those agents which were necessary to relieve the various ills of mankind. Accepting this as truth, the early workers in this new field of research began a painstaking, laborious course of investigation of plant life and the results of its administration upon various diseased conditions. Beginning with the use of a

few plants, our materia medica has grown and expanded till it is composed of many tried and faithful agents for the alleviation of disease.

Close observation has taught those who adhered to this system of practice that there were certain forms of disease expressions which would always be removed by giving certain medicines. It was also found that it did not make any difference what the disease was, for, if the particular expression was present, the indicated remedy would give relief. Following this line of investigation, the Eclectic practitioner has gradually amassed a knowledge of the curative properties of drugs which has formed the Eclectic materia medica. Not only has he taken plant life and extracted the health-giving properties, but he has taken the drugs in use by other systems and developed from them new uses by means of the difference in the size of the dose administered. Thus a physician who practices Eclective medicine must be a close observer, a good reasoner, and an independent thinker. They do not adhere to authority only so far as their own experience bears out the teaching of such authority. They are not satisfied with what has been accomplished, but are constantly at work evolving new truths regarding the remedies used for the ameliation of disease conditions. The knowledge thus gained is not only being disseminated among Eclectic physicians, but is gradually being engrafted into the practice of other systems. The Eclectics, as a school, are beginning to be honored for the contributions they have made to the materia medica of the world.

All this shows that the definition of the word Eclectic, as before quoted, is entirely wrong, so far as it applies to the practice of what is known as Eclectic medicine. How, then, should we correctly define Eclectic medicine?

The following definition is concise and, to my mind, correct: Eclectic medicine declares disease to be impaired life, with certain definite expressions which are amenable to accurately adapted remedies.

The Eclectic physician must of necessity be a close observer. He must be able, not only by his diagnosis to name the disease—for the benefit of the patient and friends—but also to distinguish the varying conditions which call for the different remedial agents. He cannot be a routinist. He must carefully examine each patient, no matter what the disease may be, in order that he may correctly adapt the right remedy to the right patient.

Because he has a half dozen cases of pneumonia is no reason that each one of those patients should receive the same treatment. In all probability each one of the six would require a different medication to restore them to health.

We read much concerning specific medication in medical journals of the present day. While this term is properly understood by the Eclectic branch of the profession, the rest of the fraternity are sadly at sea regarding their interpretation of its meaning. Those who made their diagnosis for the purpose of naming the disease, and then treat that name, are right in their declaration that "there is no such thing as a specific medicine for disease."

The Eclectic physician does not now claim—nor ever did—that he has a remedy that would always cure a given disease. Such an idea is an absurdity. What he does claim, and what he is always ready to maintain, is that there are certain disease expressions which are indicative of certain conditions; and for these conditions he has discovered remedies that will relieve them and assist Mother Nature in her restoration to health.

That this doctrine is true, that it is practical, that it is successful, there are thousands of physicians scattered all over this country who will gladly testify. They give this testimony simply because of the gratifying results which have attended their labors in a practice which was founded on Eclectic teaching.

Physicians who practice Eclecticism are not all contained within the Eclectic ranks. There may be found in the other schools men who have accepted Eclectic reasoning, followed its teaching, and reaped its successes. Sometimes they acknowledge their conversion. Doubtless many are prone to reap the results, yet join in slandering the source from which they came.

Truth has never yet been overthrown by the slander of its enemies. The truths proclaimed by the Eclectic physician will in no wise differ from others which have been enunciated during the world's history.

One thing more must not be overlooked. That is the medicine which the Eclectic physician uses. He long ago learned that it must be properly prepared and of a definite strength and quality. Of what use would be his keen diagnostic ability if he attemtped to relieve diseased conditions with worthless preparations? Without doubt much of the success of Eclectic physicians is due to the reliability of the medicines they prescribe.

All honor, then, to the pharmacists who have produced such

remedies. Among them there is no name that stands higher that than of "Lloyd." Wherever this name is seen on any pharmaceutical product, physicians of all schools accept it as synonymous of proper preparation, purity, and strength, and unite in the tribute of praise.

LEAD POISONING.

LEONARD BAILEY, M. D., MIDDLETOWN, CONN.

From a physiological standpoint lead is an alien element, having no legitimate place in the human economy. Although it has been found in the body on analysis, it probably came there as an impurity of ingested material, and was not gotten rid of. Sooner or later its presence gives rise to disturbances of bodily functions, commonly resulting in serious disease, and not infrequently death.

In view of the facts that all the compounds of lead are poisonous, that lead so readily forms compounds that are easily taken into the system, and that it is employed so extensively in the arts in ways in which it is possible for people to be exposed to its effects, it is not surprising that cases of lead poisoning are as common as they are; but since these facts are so well known, it is something of a wonder that physicians frequently fail to detect, or at least suspect, the disease.

The poison may enter the system through either the digestive organs, the lungs, or the skin. A portion of that taken into the alimentary canal may be excreted in the feces, unabsorbed; and some writers claim that it is also given off from the body in other excretory products, being sometimes found in the urine, but commonly in compounds in combination with albumen. Osler says it is rapidly eliminated by the kidneys and skin. The more common doctrine, however, is that where it has been absorbed and taken into the circulation it enters into combination with albuminoids in various parts of the body, and is not easily eliminated, and when continuously taken into the body it accumulates. In fact, lead is generally pointed out as the typical cumulative poison.

The causes to which the intoxication may be due are many and various, and are quite familiar. The disease results perhaps most frequently from the absorption of lead in some form from

the digestive tract, where it is too often present as an impurity of food or drink. The danger in the use of lead pipe for conveying drinking water, especially if the water is soft, or exposed to the air, or contaminated with the products of decomposed organic matter (a condition of drinking water which is altogether too common), is too well known to need comment; and that there is also as much or more danger in the use of foods or beverages that contain acids, if they have been in contact with lead, is equally well known. Cases of poisoning from such causes occur frequently enough from pure accident; but it should be considered nothing less than a criminal offense to employ lead in any form in the preparation of food materials, as, for instance, the use of lead chromate as a substitute for egg yolks for producing a desirable yellow color in bakers' goods.

The dust of lead has produced the disease, with very urgent symptoms, in those exposed to it; and the application of cosmetics and hair dyes containing lead has been followed by lead poisoning. Miners of lead ores usually are not affected, but lead workers, such as smelters, and those who handle it in different ways—type moulders, type setters, and plumbers—are often attacked. Of all this class who fall victims to the disease, painters are perhaps the most numerous, the disease commonly known as painters' colic being lead poisoning.

The disease has been observed in those who occupy painted apartments. Sometimes women who during the period of gestation occupy rooms newly painted are very seriously affected, but the effects upon the offspring are often the most serious, there being either a still birth, or the child lives but a few days or a few weeks. In several such cases which I have observed there have been more or less urgent symptoms of lead poisoning. The claim sometimes made that the vehicle used in mixing paint is the cause, and that the lead of the pain is harmless, seems to me to be without the authority of reason or observation. Turpentine is, indeed, possessed of irritating properties, and when ingested in certain ways may have painful effects upon the mucous membrane. It may affect the kidneys and ureters, but more particularly the bladder, producing a mild or severe strangury and symptoms resembling more or less those of lead poisoning may follow. But in the cases I have observed the symptoms have been so strongly marked and distinctive that I have had no hesitation in regarding them as indicative of lead poisoning.

As a therapeutical agent lead has been long and extensively

used in some forms of disease. Lead acetate is used probably more than any other salt of lead. The sub-acetate—Goulard's Extract—or vinegar of lead, is used considerably as a local application in skin diseases such as eczema, erysipelas, and others; and in a more dilute form—lead water—is administered in conjunctivitis and other mucous inflammations.

Some writers claim that the acetate of lead is not poisonous, but can be taken in quite large doses with impunity. Osler states that lead given medicinally rarely produces poisoning. My experience, however, does not bear out these assertions. Several cases in which poisoning was caused by lead administered for medicinal purposes have come under my observation. So far as I could ascertain, the lead had been taken in small doses for several weeks. In all these cases the symptoms were strongly marked, indeed were pathognomonic; and treatment for lead poisoning restored the patients completely.

Perhaps one reason why lead used as a medicine is considered safe is that not uncommonly there is administered with the lead something that will counteract it and render it harmless. For instance, in an article in a recent number of one of the medical journals, acetate of lead in small doses is recommended for epilepsy. It is to be taken three times a day, and a full dose of magnesium sulphate is to be taken each morning. The writer does not tell why the magnesium is given, but it is a wise precaution, because a portion of this salt reacts with the lead acetate and produces the lead sulphate, which is very slightly if at all soluble in the intestines; while the remainder of the magnesium produces a purgative action, which helps to sweep the lead out of the alimentary tract.

In my opinion, lead is a vastly overestimated remedy. According to my observation and experience it has proved not only not a safe remedy, but a positively dangerous one, since its ultimate effects are so likely to be injurious rather than beneficial. It affords an excellent example of the remedy worse than the disease. I can see no justification for its use by Eclectics, at any rate, where the materia medica of our school affords remedies which are more efficient in all cases where lead has been employed, and which at the same time are without injurious effects.

Two clinical forms of lead intoxication are recognized, the acute and the chronic.

Acute Lead Poisoning: This form of the disease is usually

developed in those recently exposed to the poison. It sometimes results from the injection of a large dose of lead in soluble form. The symptoms are usually those of gastro-intestinal irritation. Whenever a patient is suddenly seized with very severe pain in the stomach and bowels, and the history of the case shows or even suggests exposure to lead, this disease may be suspected. If there is vomiting of matter of a dark or bloody color, the diagnosis is still further confirmed. There is usually tenderness or sensitiveness to pressure over the affected parts. In mild cases there may be obstinate constipation, with some of the symptoms of ordinary colic. The blue line on the gums so common in the chronic form of the disease is not often observed in the acute form.

The acute intoxication usually runs a rapid course; some cases that are severe, with intense gastro-intestinal symptoms, unless promptly relieved may prove fatal within twenty-four or forty-eight hours, while other by energetic treatment may be relieved in as short a time. Unless the cause of the disease is removed and the poison well eliminated from the system, the acute poisoning may be followed by the chronic form.

Treatment: Milk and the white of eggs are useful and in the absence of antidotes may be resorted to. Their action possibly consists in the formation of albumen compounds with the lead that are less easily absorbed. Unless there has been free vomiting, emetics should be administered, such as ipecac, or large doses of warm water; mechanical stimulation, such as tickling the fauces, is usually effective.

To relieve pain morphine may be given, either by the mouth or hypodermically, in quarter-grain doses; but the treatment which I have found most satisfactory for this purpose is the application of hot water and a mixture of chloroform one part and alcohol three parts. A piece of cotton cloth or flannel of considerable size is folden in three or four thicknesses so as to afford a surface of eight or ten inches square, and wrung out of water as hot as can be borne, and a small quantity of alcohol-chloroform mixture is spread upon one surface, which is then applied over the abdomen and stomach. If this is too strong for the patient it may be lifted occasionally and applied again. This is quick and effective in relieving pain, and is much preferable to the morphine, as it leaves no bad effects; it does not interfere with the process of secretion as morphine frequently does. For reaction with the lead salt present the alkaline sulphate of

sodium, potassium or magnesium are chiefly relied upon, the latter being commonly used; these act upon the lead to produce the insoluble lead sulphate. The formula which in my experience has been most satisfactory, however, is the following used for a long time and afterwards published by Prof. I. G. Jones. It may be found in the Jones and Morrow Eclectic Practice, published half a century ago:

Sulph. magnesia	℥ xii
Nit. potassa	℥ j
Sulph. acid	℥ ss
Boiling water	o ii

Use cold, and give a wineglassful once in three or four hours until it has acted thoroughly on the bowels.

I have said nothing about sedatives nor any class of specifics; these may be given if indicated. One remedy which might be tried is phytolacca, the specific tincture to be given in five drop doses once in two or three hours. My experience with this drug, which has been limited, will be mentioned later, in the treatment of the chronic form of poisoning. The purpose for which a trial of it is suggested in the treatment of acute cases is to ward off some symptoms and to prevent relapse by reducing the lead to a harmless condition and to favor its elimination.

Chronic Lead Poisoning: Tanquerel makes four divisions of the chronic form of lead poisoning, namely, colic, arthralgia, paralysis, and encephalopathy. Colic is the most frequent, for of 2,251 cases there were 1,217 of colic, 755 of arthralgia, 107 of paralysis, and 72 of encephalopathy.

Colic: For some time, it may be days, or even weeks, preceding an attack of either of the latter of the above named forms of this disease there may be the emaciation and the peculiar light yellow appearance of the skin of the condition which has received the name of saturnine cachexia. There will be gastric distress and uncomfortable feeling in the bowels. As the disease develops there will be pain, which in some cases is confined to a portion of the bowels, but most frequently extends over the entire abdomen. In nearly every case constipation is present, though in some there is diarrhœa. The blue line caused by the deposit of sulphide of lead in the gums is most always present, although in cases of all the different forms it may be absent. It is found near the teeth on the edge of the gum, and is considered of great importance as a diagnostic symptom.

There is sometimes quite persistent vomiting; there will be a metallic taste, the breath will be foul, the tongue will be furred, but will look very pale. The heart's action is often very much retarded, the pulse diminishing in frequency and also being frequently full and hard. I have observed a peculiar sensitiveness of the skin over the abdomen, which will not admit of light pressure, but when the pressure is made deeply there is a feeling of relief.

These symptoms may continue some days, and under treatment abate, but they may recur after a few days with all their original violence.

Arthralgia: In this division we usually find the urgent symptoms beginning in the lower limbs and about the joints, the knees in particular. There will be a severe and burning spasmodic pain which extends to some of the tendons and muscles. Unless the disease is checked by treatment it may extend to the arms, to the chest, and even to the heart, and produce a condition which will resemble angina pectoris. The muscles attacked in the limbs are the flexors, but not invariably these, for we find now one set of muscles and then another in this morbid condition. Quite often there is tremor of the affected muscles.

Lead Paralysis: Lead palsy may, according to Tanquerel, occur as soon as the third day after exposure. It may follow colic or arthralgia, but often it appears without any of the above named conditions. Although it may develop rapidly after lead is taken into the system, yet the eminent author just mentioned says he has known a man to work fifty-two years in lead before showing any signs of being affected. These extremes may be accounted for on the ground of susceptibility, possibly raising the question of elimination.

While the lower limbs are not infrequently involved, this form of the disease usually develops in the arms, the right arm as a rule being affected first. It nearly always attacks the fingers and wrists, whence it extends to the extensor muscles of the arm. The peculiar symptom known as wrist-drop is familiar. There may be a loss of sensibility, but the particular affection is in the impairment of the nerves of motion.

Encephalopathy: This is the gravest form of lead poisoning. The commonest and most important symptom is the eclampsia saturnina. These convulsions are not preceded by the aura which is so peculiar to epilepsy, but in other ways they resemble

this disease. Another symptom is coma following the convulsion, from which the patient may regain consciousness and again pass through the same condition after longer or shorter intervals.

For patients with this form of disease there is but little hope. Mild cases sometimes make a partial recovery, but the physician is not justified in giving too much encouragement. The demon lead has found its way into the brain and is making havoc there, and this organ seems to have but little power to cast it out. The disease has been more rapidly fatal where the attacks are often and violent.

Treatment: There seems to be a pretty general uniformity of opinion regarding the therapeutics of lead poisoning. Nearly all authorities agree that the potash preparations are of utility, and that magnesium sulphate is an important agent in the treatment of this disease, the purpose of the latter being, as previously stated, to change the uncombined lead into the form of the insoluble lead sulphate, thus preventing further absorption, and that of the former being to break down the compound of lead and albumen and take away the lead. There is, however, some question as to the advisability of using potassium iodide in large doses, if we regard the claim of some writers that while the potash salt breaks the lead from its connection with albumen it does not reduce it to a form in which it can be easily eliminated, but simply sets it again into circulation and starts it on a new career of poisoning. Yet there seems to be evidence that potassium iodide has a very beneficial effect in the work of elimination. In all cases, unless for reason of idiosyncrasy, it might be given in small doses.

Alum has been recommended as being able to do all that is done by both potassium iodide and the alkaline sulphates, while there is not the danger in its use that there may be in the case of the potash. Prof. J. M. Scudder recommends it in ten grain doses, to be given once in two hours.

My reliance for many years has been the magnesium sulp. mixture of Prof. Jones; without regard to the particular form of the disease or condition of the patient, it has been the basic remedy. In a few hours after administering it in such a way as to obtain a thorough cathartic effect the colic and arthralgia pains have entirely disappeared. It should, however, be continued in small doses, falling short of catharsis, for a considerable time, for reasons that are obvious.

In very urgent cases, where there is severe and unbearable pain, it will be necessary to make use of anodyne in some way. The chloroform mixture on hot clothes, used as described in the treatment for the acute intoxication, or, if it seems advisable, morphine subcutaneously, should be resorted to.

There can be little doubt of the efficacy of baths in which sulphur is an ingredient. My favorite preparation for use in water for bathing is as follows:

Sulphate of magnesia .....4 parts
Bisulphite of soda .....2 parts
Bicarbonate of soda .....2 parts

Four to six ounces of this to be added to every twenty gallons of water in the bath, the water to be used as hot as can be borne.

There will be occasion when strychnine will be of benefit if rightly given. For the paralysis, after a thorough use of the magnesium mixture, it may under certain circumstances be given in doses of a sixtieth, fortieth or twentieth of a grain three or four times a day. Some caution should be here observed, however. In my experience and in that of others whom I know to be reliable, it has sometimes proved to be harmful where the brain is involved, particularly if there is éclampsia. A very minute dose of nux vomica or strychnine has been known to bring on convulsions.

In the discussion of the treatment of the acute form of the disease reference was made to phytolacca as a promising remedy. The chemical composition of the drug seems to suggest a reason why it should be useful. Prof. Lloyd says the root of phytolacca is remarkable for the large amount of potassium it contains.

In treating typical cases of chronic lead poisoning, where the symptoms of the blue line on the gums, weakness of arms and wrist-drop and colic were present, I have made use of this drug, and in all of them it seemed to have a good effect, affording relief in a short time. My usual dose is five drops of the specific tincture, although ten or fifteen drops may be given in some cases, depending upon the susceptibility of the patient. The smaller dose once in two hours is generally sustained, and if well borne, the larger doses once in three or four hours may be administered.

My experience with phytolacca has not been sufficient to warrant any positive statements concerning its value in these

cases, nor any predictions for its future; but it has been enough to indicate that the drug is well worthy a trial. I would, therefore, recommend that those who read or hear these remarks test it thoroughly when they have opportunity, and record their experiences, whatever they may be. Sometimes small doses of podophyllin also have a good influence. Four or five grains of the second trituration three times a day seems an ample dose.

In these cases where there is marked anemia, especially in the chronic form of this disease, there should be restorative treatment. For this purpose the berberis aquifolia is useful, enjoying an excellent reputation not only as an alterative but as a tonic as well. It may be given in doses of fifteen drops of the normal tincture or the specific tincture four times a day.

There should be a nourishing diet, including food materials that are easily digested, such as lean meats, eggs, milk, etc. Sometimes certain of the prepared foods are advantageous, particularly those requiring the minimum amount of work from the digestive organs. From my own experience I can specially recommend Horlick's Malted Milk. I have used it for a long period in a great variety of diseases, including lead poisoning in both forms, and it has invariably given good results.

EVOLUTION OF THE SENSES.

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When we have recognized those physical twins, anatomy and physiology, and their offspring, the five senses, then we are in a position to study the evolution of each individual of the family of senses. When our investigation has reached its physical limits, we may then stop and be content in company with the materialist and theist, or reach out into the philosophy of the idealist and transcendentalism. Any unprejudiced thinker, informed upon general evolution, cannot deny the physical basis of the mind and the mental basis of the soul. Never mind at present to what flights the soul may reach; we shall first establish for it a firm basis for action and a reservoir of supplies. This shall be material and physical and as practical as any science of to-day. I have attempted to show in the former paper of this series, namely, "The Dawn of Consciousness," the physical

basis of consciousness. Taking it for granted that that has been established, we shall proceed on that basis.

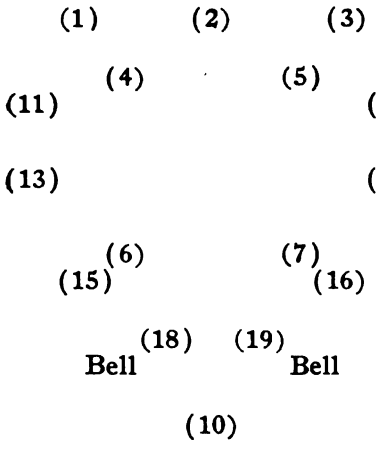
The correlated phases of consciousness are all unified in the more comprehensive term, mind, the distinctive test of which is choice. "The evidence of choice is the antecedent uncertainty of adjustive action between two or more alternatives." (Romaines.) The criterion of mind given by Romaines is clear and concise, "If the organism learns to make new adjustments, or modify old ones in accordance with the results of its own experience, it cannot be due to reflex action." This marks the stage of intelligence, and applies to the upper limit of non-mental action. At the moment of conception, by a coalescence of two opposite sex cells a human being is born. During the period of utero-gestation all viparous animals experience an abbreviated evolution, parallel to the phylogeny of the whole animal kingdom; during this period the individual rapidly experiences the main types of all animal life. The individual embryo develops every anatomical and physiological organ and latent future function for which it will have any possible use. Oviparous animals, on the contrary, have no utero-gestation; they have finished their evolution in the highest type of bird life. They are on the road to extinction.

When a human being is born into the world at full term, after normal gestation, an examination will show every organ perfect, all that are found in the most perfectly developed man in his physical and mental prime are here, every bone, muscle or other organ, with all that accompanys them; every motion and function is provided for. Thus far evolution is master.

"Every mental act has a corresponding physical organ that reacts for no other kind of stimulus," and vice versa. It is a well known fact that the cerebral hemispheres are the only organs concerned in any mental operation. This is repeatedly proven by experiments, operations, accidents and diseases of men and animals. The multitude of nerve fibers issue forth from the cerebral center, and are able to "play down" upon the nerve organs, receiving messages and giving orders to numerous muscles and organs. It is very like a central telephone station from which emanates numerous wires in all directions, collecting orders and requests to be returned to the central before they can be recognized.

In the early stages of evolution all muscular movements are simple and single. Time and practice has blended many separate

motions into a few compound movements. These muscular co-ordinations depend upon the simultaneous actions of groups of nerve centers. In a perfectly analogous manner we see a similar blending of simple ideas to form compound ones. In the development of the mind there is a constant combining and blending of simple ideas into groups that may be expressed in single terms, and still carry a compound idea. For instance, the simple word bell carries with it all the following details. (Adopted from McCosh.) "Each word intelligently used has been acquired by a process of education. When analyzed it will be found that the mental basis of speech is made up of a number of word images and memories. The word bell has such mental elements as visual memory, auditory or tone memory, touch or tactile memory. The word bell as heard differs from the tone of the bell, and is perceived in the word hearing memory. The word bell as printed or written has been retailed in the word seeing memory. Finally there are two effort memories connected with the muscular movements involved in uttering and writing the word. This word concept bell is made up of a number of memories, each one of which is represented on the diagram by parentheses. They are also so closely related that when one is aroused the next comes up also. These parentheses are therefore united. Each of the memory pictures of the bell is a relic of a past perception, one or many times repeated, and acquired through the organs of sense. The visual through the organs of sight. The auditory through their organs. The nerves unite their centers with their external organs. If the memory picture is a relic of perception, it follows that memory is located in the same region in which the perception occurs. If now I show you a bell, and ask you its name, your visual memory is first aroused, then your word hearing memory, and finally your word uttering memory; there are three distinct memory pictures arising in your mind in succession by the process of association. If, however, I merely ask you to repeat the word bell after me, I arouse but two memories in succession, the word hearing and the word uttering. This requires but half the time by actual measurement. The repetition of a word takes but a quarter of a second, while the naming of an object takes one-half a second." The different centers may be interfered with by disease or other troubles, or the connecting fibers may suffer, as we frequently see.



1. Auditory memory.
2. Tactile memory.
3. Visual memory.
4. Word-hearing memory.
5. Word-seeing memory.
6. Word-uttering memory.
7. Word-writing memory.
8. Mouth and motor nerve.
9. Hand and motor nerve.
10. Bell.
11. Auditory nerve.
12. Optic nerve.
13. Temperature nerve.
14. Tactile nerve.
15. Temperature nerve.
16. Temperature nerve.

The speech center is in the left hemisphere for right-handed people, and *vice versa* for the left-handed. So with language in general. The best minds are those who have condensed details in groups, and can handle compound ideas where once simple ones were used with difficulty. Simple states of consciousness likewise become consolidated. It is a well recognized fact that numerous muscular coördinations are inherited. So with innumerable special associations of ideas. Even within the history of civilization this is very evident. The pathology of mental and physical states are parallel, but on different planes. When the motor nerve centers have ceased to act, muscular paralysis ensues. If it be a mental center, then idiocy follows. Again, irritation in some center of muscular coördination produces convulsive movements, ataxic if chronic, choreic if sub-acute, spasmodic or convulsive if acute. If the irritation be in the mental coördinating centers, insanity or mania results. So all physical and mental expression, when properly understood, will indicate what particular cerebral center is in action or disturbed. A similar cause produces vastly different results according to what center it is acting upon or disturbing and how strong the action. "Mania is mental convulsions, while unconsciousness is mental paralysis."

As low down in the animal world as the sea anemone, the power of discrimination between stimuli is already established; so also is the power of choice. Prof. Romaines placed one of

these little polypods in a tank of water, and turned an extra stream against it rather forcibly. After a few moments the anemone had gotten so accustomed to the disturbance that it would pay no more attention to it; but when a small particle of food was placed lightly upon one tenacle, it would close upon it in spite of the other disturbance. This power is exceedingly well developed in some members of the vegetable kingdom. Some cells of growing plants will seek moisture, passing around many obstacles in its search; many shoots and leaves seek the light, and many flowers follow the sunlight.

According to Darwin's investigations, the tiny tentacles of the drosera will respond to a touch of such exceeding lightness that it is calculated to equal less than one-millionth of a gram. Such extreme sensitiveness does not exist in the highest developed human beings. The tentacles of this sensitive plant take no notice of ordinary impressions, such as wind, rain, or falling leaves. In this case the plant distinguishes between the slight continuous pressure of the minutest quantity of its prey and the more sudden and forcible blow of rain drops. In the dionea (Venus fly-trap) a similar but opposition of sensitiveness prevails. The fly-trap closes as suddenly upon its prey, while considerable continued pressure is unnoticed. In the case of the drosera the viscid secretion of its glands holds its prey until the sensation can be appreciated at headquarters and an order returned to close the tentacles, which is comparatively slow. On the other hand, the sensative filaments of the dionea are not viscid, and the capture of its prey must be done quickly or it is lost; the slightest touch will close the lobes of its leaves suddenly. Still more remarkable is the unicellular protists in their building habits. They erect geometrically perfect structures. Thousands of varieties of beautiful shells and corals are perfectly fashioned by these simplest of creatures. Whole islands are erected by these and the bed of the ocean is changed by these feeblest of beings. Their discriminating (architectural) faculty is regarded by Romaines to be the root principle of mind. Animals low down in the scale of organization have exceedingly few faculties, usually but one or two. These, however, are exceedingly well developed. Many of the protists are builders; in fact, most of them are masons and architects. They are the first and most perfect builders; although each one has but a single plan, that plan is carried out to such a finish as would tax the ingenuity of the combined human faculties to duplicate. So, also,

the large and magnificent shells of the tropical shellfish. When the faculties are increased in number, no single one is so perfectly developed. The architectural ability of man has had an exceedingly slow and long evolutionary history. So with all other human faculties, each one can be traced to a simple fundamental property that acted upon matter, producing results apparently desired; at least acting with a degree of intelligence that cannot be overlooked. The human mind is but the combination of the single simple faculties of the lowest animals, corelated and tolerably well developed.

The discriminating power of the surface nerves is well known. While we scarcely notice a moderately heavy blow of the hand grasping something, of sitting, of walking, or ordinary jolting of riding, yet the exceedingly fine pressure of a hair, or the feet of an insect on the surface of the body, may "tickle" one almost into spasms. This discriminating faculty is most perfect in man's very remote ancestors, the plants, especially the drosera and the dionea, as before stated. Each of these have developed different phases of this faculty. The evolution of the idea of discrimination in the abstract has come down to man from the remotest ages, and he has but recently come to realize it in himself. Many yet but dimly appreciate it. The center of abstract construction in the nervous organization of the amœba is the same as that in the human being, it having been preserved by heredity, and is one of the nerve centers that makes a man human. Those functions that began first in the evolution of animal life have persisted longest, are still with us, and are automatic; first of all of which is motion or a reaction against pressure, which is the sense of touch; reduced to its ultimate it is force.

Next in order is growth by absorption and assimilation, after which follows in rapid succession reproduction in various ways, and appreciation of certain sensations and an ability to distinguish each kind. It is self-evident that innumerable muscular coördinations are hereditary, and reasoning from the physiological to the mental results we find that innumerable association of ideas are likewise hereditary. Many of the bewildering multitude of cells and fibers which constitute the cerebral mass are able to "play down" upon these ganglia and throw different bundles of muscles into action. "Just as the innumerable special mechanisms of muscular coördinations are found to be inherited,

so numerous special associations of ideas are found to be the same."

The simplest, oldest and most constant ideas are the most constant inheritance. Likewise the power of discrimination so wonderfully developed in plant life has been preserved in the abstract, although not nearly so perfect as when in its original purity. It is now one of man's exceedingly complex faculties. The interblending of any two or more simple, single faculties will produce many different shades of ideas and opinions, the great variety depending upon the extent to which each one is pushed with regard to any other. A high order of architectural ability with no discrimination would be a failure, particularly as far as man is concerned. The corelation in different degrees of these and other faculties are what perfects man on higher planes. The same reasoning applies to the sense of sight, as the optic nerve carried one quality of vibration only, and that is a sensation of light, which is a mode of wave motion, and has its private court in the rain as well as its communicating filaments or connecting wires to all other stations; in fact, it is a member of the mental associated press telegraphic arrangement. It is the latest organ developed in the history of evolution; it is also the most complex and perfect. In conjunction with the discriminating faculty it gives more knowledge than any other two senses. The different shades of knowledge will go through thousands of shades of difference when associated in different degrees with one other faculty. When many faculties are harmoniously coördinating, then thousands of variations become millions of shades of difference in meaning. This is why no two individuals can appreciate the same thing in exactly the same way.

The five senses are so many inlets to outside knowledge. There are as many or more basic faculties. For example, allow ten inlets of knowledge, five from without and five from within, and that many are much too few. Now allow each one one hundred degrees of variation or strength of impressions, there will then be degrees to the number of one thousand, and each figure of all these numbers can be compared with every other figure, or any number of others. Now, calculate, if you can, the number of ideas that are possible on this limited number of basic elements; then raise one hundred to the tenth power, and we will get into a maze of figures that staggers the imagination, and the half is not yet told. The basic elements are finite and few, in

fact they may be counted upon the fingers, but the final—the possibilities reach into infinity. Now, take the sense of smell, an older sense than that of sight on evolutionary lines, follow with hearing, taste and touch. We can appreciate the fact that man is capable of possibilities little less than divine.

Of all the five senses, touch in its variations of feelings or impressions from contact with the surrounding media, is the original, the preliminary, the parent of all the rest. The individual protist puts out part of its body in search of food; this then became known as a pseudopod; it is the prototype of the antennæ, tentacle, and human hand, the tip-end of which learned to distinguish between various substances. Absorption by the surface, whether the surface be differentiated or not, and appreciation by the surface nerve cells, became so developed that certain characteristic properties of extraneous substances are distinguished from the sensibility of mere contact, or were in a finely divided condition and not in actual contact except as being in solution. When this state of affairs becomes a usual thing we denominate it the sense of taste. This sense was a very early developed one, and was developed out of contact impressions, through the agency of discrimination. With this sense, the second historically, came the faculty of appreciation. With a very highly organized sense of taste, uncommon characteristics could be appreciated or substances in a finer state of division could be known, a division of labor again occurs, some cells appreciating substance in contact only, others appreciating finely divided substances coming from a distance near by, so taste was of these two kinds, the finer part of which we call smell. This is the third sense in phylogenetic evolution.

We have seen that irritation from contact causes contraction or shrinking from the cause of contact; this is primary cellular activity or irritability, which developed into the sense of touch. This sense is the outgrowth of impressionability, a natural property of all gelatinous substances. Combined with vitality, we have seen this sense to be a chemical and physical property of matter so-called organic matter. Course disturbances to be appreciated must reach the surface and bear down, or be in actual contact upon the body of the individual. We have seen that by the aid of discrimination the senses of taste and smell have developed out of feeling. These senses differ only in degree, and depend upon the state of the substance causing the sensations. If the disturbance is at considerable more distance than the finer

discrimination called taste and smell can appreciate, we have a new sensation to differentiate, in which some highly sensitive cells appreciate what we call hearing. This fourth sense was a discrimination between varieties of impressions from a distance, which are only the vibrations of the atmosphere thrown into wave motion by the object, and transmitted to the brain centers by way of the ossicles of the ear. In the beginning all of these senses developed in regular order at the end of the feeler out of touch, each one more refined and perfect than the last. Hearing is the most perfect up to its position. Each sense involves all there is in the next lower, together with its faculties. These four senses may now be graded according to their sensitiveness to external impressions, and tabulated thus:

First sense is that of impressionability or feeling, called touch; first faculty is that of attention. Second sense is that of flavors, called taste; second faculty is that of discrimination. Third sense is that of odors, called smell; third faculty is that of appreciation. Fourth sense is that of sound, called hearing; fourth faculty is that of conception. Fifth sense is that of light and shadow, called sight; fifth faculty is that of association.

It will be seen that each faculty includes all grades of difference in both directions. In the forward progression the terms are more numerous and include every known term on these lines, many of which are interchangeable, and are frequently substituted for each other.

Each faculty not only attends the sense from which it is evolved, but all others in a regular order. The first sense has but one faculty, the last has five, with numerous subdivisions. The first faculties are of the greatest importance to all senses.

The last and most perfect sense known to man is that of sight. It is accompanied by an exceedingly highly developed faculty of discrimination between very distant and infinitely small waves of force called light. The mechanism of the eye is so highly organized that it cannot appreciate coarse waves. The omnipresent interpenetrating luminous ether is set in motion by the particular object seen. When motion is sufficiently rapid a sensation called light is produced, which travels at the extremely rapid rate of 186,380 miles per second. These waves vibrate so fast that 1,305 for red and 1,540 for violet will occur in the space of about one-thirty-second of an inch.

The retina is an intergral part of that cerebral center called the optic thalmi, spread out in a filamentous manner over the

inner surface or back part of the optic globe. This appreciates and measures the object; it is then referred to the great coördinating center of the associated senses and faculties. The limit of appreciation of each sense center runs into the next by imperceptible gradations. This last sense was developed upon the antennæ, or perfected tentacle, which is but an improved feeler, of a permanent pseudopod, derived from an irritated surface, and this may be resolved into chemical and physical properties of matter.

I wish to tell just here what they are doing in India. Prof. J. C. Bose, the great Hindu scientist and investigator, in a recent paper on the "Response of Inorganic Matter to Stimulus," has gone deeper into this subject than any one heretofore. He says in part that "the difference between life and death of any substance can be measured by electrical and mechanical responses. He shows plainly that the same identical response comes from metals that was heretofore thought to be peculiar to so-called living matter. He showed also that metals undergo the "death change" as well as organized matter; also that metals respond to light (well known before, but not in the sense in which he puts it) in a similar manner to that of the organized eyeball. This goes far toward proving the Indian doctrine of unity. The professor considers electrical response to be the criterion between the living and the non-living; "where it is, life is said to be; where it is not found, we are in the presence of death, or else that which has never lived. So far as it is appreciable to all of our senses, the electric response of "live metals" and organic matter are identical. A metallic wire can be thrown into the same state of vibration and tetanus that a nerve can. The actions of fatigue, stimulants and poisons and their antidotes is the same on both extremes of life, inert or vital."

We have seen that touch was the first sense. With it came the first faculty, that of attention. The second sense, that of taste, differentiating out of touch its faculty, that of discrimination was developed from attention, and accompanies all future senses. The third sense, that of smell, developed out of taste by a division of labor. It inherits the older faculties, and from them it evolves a new one, that of appreciation. The fourth sense, that of hearing, or a superior part of the third, higher developed, has the use of all the lower faculties together with its own, that of conception. With the sense of sight, described above, came the faculty of choice (combined with association). These five

faculties are not necessarily developed in the order given here, but this order appears convenient, and is sufficiently legitimate to illustrate our scheme.

These five senses are the external receivers of impressions. The faculties that accompany them are the internal ends of the same nerve bundles, or convolutions. Four of these centers are placed close together in the brain, the first of which is a general one, and requires no central organ or seat. So with its accompanying faculty. The others comprise the four great sense centers of cerebration, and are corelated; being contiguous, they act in conjunction and act simultaneously. The chief of all these is the great occipito-temporal sense center, more highly developed than any other. It is very largely occupied by the optic nerve. Each center merges into the others on all sides by imperceptible gradations. This allows the functions that finer harmony of action which makes it impossible to tell the point of division between the various cerebral centers.

In the light of these investigations we may consider speech as the last faculty acquired. It has been developed upon the conscious appreciation of sound, and may be considered a reaction from impressions in any center, then is reflected to that locality called the convolution of Broca, a reflex center, from which it is sent down to certain muscles that are caused to vibrate, the anatomical mechanism of which is well known. As sensations become more highly differentiated, reception rooms, or brain space, should correspondingly increase. This we find to be the case. In higher animals fineness of texture, depth and number of convolutions increase as intelligence increases. The first conscious sound is of comparatively late date. It was a grunt, or the release of an overplus of energy, a sort of expression of satisfaction after a big meal. We find a similar expression used for the reverse condition, that of want of food. It differs, however, in tone, and more so as the animal learns to differentiate an expression between hunger and satisfaction. The vibrations upon the vocal organs of a hungry pig are rapid and in a high key, whereas with the satisfied pig they are coarse and slow. When this much is appreciated by the individual, then the sensation of hearing its own voice or appreciating its own vibrations—in conjunction with the faculty of discrimination, choice and the will power, all of which are corelated and combined as one in appearance—will produce all grades of sound, from the croak of a frog to the warble of a canary bird, or from a pig to a prima

donna. So we find the history of this faculty due to corelated reflexes, reflected to the convolution of Broca, and from there reflected as vibrations to the vocal organs. This is but the throwing off of accumulated energy by a roundabout method and through highly differentiated mechanism. Like the music of the organ or flute, the overplus of wind is blown off through sonorous machinery.

Thus it seems that speech was developed before conscious thought. The principal to speech was an explosion of force; and this came before an organ to control the vibrations was differentiated. When controlled mechanically it was consciously appreciated by the sense of hearing. The finer modulation which followed later was the result of voluntary repetition. Just as the evolution of the mechanical musical instrument has occurred, it was the progressive control and modulation of vibrations, and only those vibrations that could be appreciated by the sense of hearing.

The scale of vibrations appreciated by man is extremely limited. We have reason to believe that what we appreciate as odor some animals translate as sound. When man differentiates to that higher degree, then the sweet music of the flowers ringing their fragrant odors together will be as much finer as the song of a bird compared to a blow from a club. A still higher plane of sensitiveness awaits man. When the sense of smell may have progressed so far, others will progress in the same ratio. This occurs in man only. All human senses and faculties have a tendency to work in unison and progress in harmony; this is not always the case amongst the lower animals. In many such we frequently see some one of these senses developed all out of proportion to all the rest. The sense of hearing in the deer, of smell in the dog, and of seeing in the eagle, are cases in point.

To-day we are seeing an infinite number of heavenly bodies away out in infinite space; then we will hear the music of the worlds singing together in divinest harmony. When we reach this sublime stage of vibrations, then vision will be an X-ray for near objects, opaque substances will be transparent, darkness will be annihilated. We shall then be able to see the waves of time as they beat against the shores of eternity. Then this human ego, when tuned to appreciate all these infinite vibrations, will know all things, will be all things. This is the goal.

A DOCTOR'S VACATION.

JOHN FEARN, M. D., OAKLAND, CAL.

And why not the doctor have a vacation? Is it not said that all work and no play makes Jack a dull boy? Truly, and I have been wont to tack onto that, and all play and no work does not make him any brighter. Two years ago when going away for health and pleasure, an old lady accosted me and said: "Why are you going away, you look so well?" I replied: "Yes, madam, and I will look well in my coffin if I ever live long enough to have one."

This year when folks were coming home from vacations I began to feel that I needed rest and I must have a vacation. I set my time on several occasions, but nothing came of it. At last, on September 7th, I bought my ticket, and the next morning found me on my way to Tahoe. It was a pleasant trip to Truckee. The next morning I was up bright and early, to find the roofs white with frost after a cold night. I sallied out to enjoy the cool morning air. I stayed there till the next morning, when I boarded the cars of the Lake Tahoe Railroad and Transportation Company. For about fourteen miles we sped along by the banks of the Truckee, brawling alone in its pine-fringed bed. Soon we were at Tahoe City, where we boarded the steamer and started for our trip around the lake. On the shores of the lake there are many beautiful resorts. But friends had persuaded me to go to Lakeside House, Stateline Postoffice, operated by E. B. Smith & Co. Soon we were at the piet and leaving the steamer were taken in charge by the host and hostess and Mr. Arthur Hill, a member of the firm.

I never saw a place of resort with more attractions and less drawbacks in my life. Splendid accommodations, nothing to be apologized for; food of the best, and abundance of it; beds the cleanest; saddle horses and carriage horses at reasonable rates; boats free to ride on the lake; beach bathing the most delightful; pure air and pure water; no roystering drunkards, but company of the best men and women of good social position, who had come from business cares to this delightful retreat.

I have lived several years in the Sierras, and have returned to them again and again, each time to be more charmed with

their beauty and awful grandeur. I believe it is the ideal place for the hard-worked physician, or any other tired individual, to rest and recreate. One gentleman said it was waste of time and money for me to go at this season. I know better. The first storm of the season passed before I came, and since then the climate and weather leave nothing to be desired—nights clear and cold, making blankets very desirable; days sunny and bright, simply perfection.

Are you in search of the beautiful? Surely a more beautiful sheet of water than Lake Tahoe cannot be found. It is about 21 miles long, 12 miles wide, and in depth nearly 2,000 feet. As it lies bathed in the morning sun, scarcely a ripple on its surface, its color the most beautiful and bewildering, and clear as crystal, so that you look down many feet into its water and small objects are seen on the sandy bed. All around it are mountains clothed in many places from base to summit with the beautiful Sierra conifera, fit setting for this gem of the Sierras. And this is not the only lake in these parts. Echo, Fallen Leaf, Star, Heather, and many others are within easy reach of this resort, all being stocked with finny beauties.

Are you fond of mountain climbing? Here is your paradise. Mounts Tallac, Job, Job's Sister, and many others, but towering above them all in this vicinity, Mount Freel, rising to an altitude of 11,200 feet. I have not heard of any bears to contest your path; no rattlesnakes, and no poison oak to threaten.

Are you fond of whipping the stream and enticing from their hiding places the speckled beauties? Come with me behind a pair of mountain steeds, Mr. Hill holding the ribbons. After a lovely ride of about four miles along the base of the mountains, we come to an old saw mill called Woodburn's mill, a relic of earlier days, where many a monarch of the Sierras has been made into lumber. But the mill is now idle. It is built on a beautiful creek called Trout creek or Pixley's creek. Ah! that creek, with its ceaseless flow of cool, clear water, making liquid music, hurrying along to join the Little Truckee, and thence to be lost in Lake Tahoe. The season is late, the water is rather low. But cast your line at the foot of the falls or in the lea of that fallen tree. The fish rises gamely to the bait, and there you have him landed, his sides bedecked with spots that rival the costly stones on her ladyship's necklace. We stayed but a short time, but long enough to prove that Pixley creek is well stocked with Mackinaw and speckled mountain trout. And this is only

one stream. As we return, the sun is setting behind the mountains. And how gorgeous!

Do you want to imprison any of the beautiful scenes? Our driver, Mr. Hill, is an expert with the kodak, and on his return, in his dark room will finish the picture.

Are you fond of geology? What a field! How it would stir the heart of Hugh Miller!

Are you a botanist? How beautiful and varied the flora! Time and space forbids my entering into detail.

Do you love birds? Here you have the saucy blue jay and magpie, the beautiful blue bird, quail, grouse, partridge, the soaring hawk, and many others. Of the fauna I cannot say much. The deer have gone down to the lower ranges; cottontails, jack rabbits and coyotes are in evidence.

But do you want rest, as I did? Then Lakeside Park and the whole Tahoe range is an ideal spot. No shriek of whistle, no grind of cars, no hum of machinery. This morning is as beautiful a morning as man ever saw; yet for some time not a sound has been heard, except the sound of the cow bell as it comes miles across the lake, the flit of the grasshopper or the tap of the woodpecker, and the surface of yon lake is as the surface of a mirror.

By and by the breeze will come down the mountain sides, stirring the leaves of the pine trees, which, like millions of tongues, will have their say. These will join with towering mountain and beetling crag, with rushing stream and glistening stars, and as I stand bareheaded in this temple of nature, I hear a voice which says, "All Thy works praise Thee; in wisdom hast Thou made them all."

My search for beauty, my quest for the sublime, my hunt for rest has been successful.

MICROBES AND THEIR FUNCTION.

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Disease germs are either the producers or the outcome of morbid action, their evolution and growth being the process by which the human body is reduced to its original constituents or elements.

The diseases in which they either appear or induce, being simply a partial death in their growth in the tissues or blood, they all yield toxins, which either annihilate themselves or the vitality of their host.

All causes that produce disease or partial death create degeneration of tissues and aid in the evolution of microbes. Density of population in large cities, imperfect sanitary conditions of environments, breathing an impure, vitiated, germ-laden atmosphere, living upon insufficient food or upon an excessive amount of canned, preserved or adulterated food, or ferment-saturated milk or beef; indulging in excesses of all kinds, viciously spurred on by the high pressure of modern living, the extreme struggle for existence, for wealth, excessive ambition, all these lower vitality, diminish the vital resistance of our people at large, and end in bacterial evolution.

This degenerative tendency is aided by the almost universal use of stimulants and narcotics, by the presence of tubercle, syphilis, etc., in our midst, so that it would seem that the progress of sanitary science and the precautions taken against contagious and infectious diseases have been offset by general lowered vitality.

The profession seems to have run mad in the rush to account for this lowered condition by the presence of microbes.

In analyzing the microbe theory we find that microbes have no function or power to produce any disease whatever in a healthy organism. Soon after the death of a tissue or a body the microbes commence the separation and isolation of the anatomical and chemical elements, thereby fitting these elements again for living organisms. That is their duty and function.

The microbe is not a disease producer. It takes hold of that matter only which is decayed or dead, and transforms that matter into its primitive elements, whereby it becomes useful

again for assimilation and growth of new animal and vegetable vital tissues. Microbes cannot grow without a suitable soil.

Since the law for microbes and their functions is that they should be present wherever there is decomposed organic matter, it is the decomposed matter in the body that lies at the seat of the trouble; the abnormal amount and quality of such matter. If that matter were not present, then there would be no microbes present, consequently the simple presence of the microbes is not injurious to the human body.

Infectious diseases are more numerous than other diseases, and if microbes cause the disease, by what or how do they injure the body? How or by what do they produce the anatomical changes? Why do some patients die and others not? Why are some persons immune against certain diseases and others not? At any rate, in what does the immunity consist? These questions have not been explained nor answered, yet the bacteriologist claims that microbes produce diseases. Decay is natural in the organism, and when there is too much of it present in the body there are an increased number and kind of microbes present, which kind depends much on the kind of tissue involved. Microbes follow as a "result," but are not the cause of disease. It is an error to suppose that microbes are our enemies. Without the microbes animal and vegetable life would become extinct. They render such life possible.

All infectious diseases depend upon the quantity and quality of the virus, not upon microbes. Impoverishment or an abnormal change of the blood lymph or of any decomposed tissues furnish the suitable soil, and if the suitable soil is injected into a healthy individual it causes disease; and if that suitable soil is derived from a specific disease, it causes that disease.

In all febrile diseases the blood swarms with microbes, and yet the sensible physician pays no attention to the microbes, but he cures the disease.

Filth is the great breeder of disease. Prevent or remove the filth in and outside of the body, and we need not fear the microbes. When organic matter is once present in the body in abnormal quantity and in such state that different kinds of microbes live in it, that matter is to the body a poison, and is able to affect the matter in such a way that the same kind of microbes can live and multiply in it. If we remove or counteract that poisonous matter, we cure the disease that has caused it. For instance, if we inject, apply or administer a sufficient strength

of a certain remedy, such as strychnine, arsenic, carbolic acid, or one of many other remedies (surely without microbes), we produce an inflammation and change of tissues, in which afterwards microbes are found. If we add certain other medicine to the injection, application or administered poisonous medicine, so as to counteract the effects, no poisoning takes place, and no change of tissues, and no microbes will be found. As all antiseptics in medicinal doses are more or less stimulant to cells for healthy action, they must have counteracted the poisonous effect of the decayed matter.

The "culture soil" in which the microbes are cultivated or propagated may be illustrated as follows: Every one knows that mutton broth or bouillon changes or decomposes according to the temperature. The bacteriologist prepares his "culture soil" with mutton broth or bouillon, or similarly decomposible substances, by adding already decomposed blood or tissue of a specific disease. Suppose he produces the same disease in the person or animal injected, does that prove that the microbes in the decomposed "culture soil" produced the disease? By no means. The poison of the culture did it. In case he neutralizes the poison he can no longer produce the disease. In every instance decay or death of tissue must precede the microbe.

Having, then, found that the microbes are not the "cause" of disease, we conclude that by killing the microbes simply we can never cure the disease.

The finding and proof of the existence of bacillii has not in the least advanced our knowledge of the disease or given us any advantage in regard to diagnosis, prognosis or treatment.

The bacteriologist can never succeed in explaining the cause of any disease, because the microbe theory is not consistent with physiological law.

The scientifically educated and commonsense physician adheres to cellular pathology. He is, therefore, always right anatomically, physiologically and chemically.

Modern medicine should recognize cell function as the important factor in maintaining health. For generations past only the gross manifestations of disease were observed, but with increased knowledge derived from investigation and improved facilities, the medical horizon has correspondingly widened, so that to-day it is rare to find a physician who fails to take into consideration, when prescribing, the immediate as well as the remote effects of medicinal substances upon cell function. For

example: He knows that certain medicaments affect the cell function of the kidneys, that others affect more especially the liver cells, and that still others manifest their activities upon the cells of the cutaneous system; and a large number of the more active remedies are employed because of their known physiological action—that is, their influence upon the cellular structure.

And the converse of this proposition is equally true, namely, that disease affects the cell function of particular structures and organs. The old-time theory held that diseases were of the blood, and the lancet was used. The treatment of the microbe theory is worse than the lancet was, as the latter weakened only by removing a part of the nutritious blood of the body, but the microbe killing remedy introduces ten devils into the body where before there was only one. Those who administer microbe killing remedies are unable to make the proper diagnosis otherwise. Such resort to the microscope, and are misled because in any disease there is more than one kind of microbe.

All thoroughly educated physicians in anatomy, physiology and medicine positively know that the cells do the work in organisms, and consequently only the ignorant throw aside cell pathology and try to establish a microbe pathology in its place. The proof of the existence of the so-called bacilli has not explained a single disease; neither has it brought out any advance in diagnosis, prognosis or treatment. We know the vital reaction of the cells and distinguish between the effects caused by decayed or poisonous matter. For instance, ptomaines are the principal acting substance in decayed or putrified animal or vegetable tissue. The ptomaine is to dead tissue what the albuminoid (proteid) is to living matter. And here it may be remarked that it must not be imagined that everything that stinks is a poison. To prevent dirt and filth and keep things in a good sanitary condition should be done not with a view of destroying microbes, but of preventing decomposed poisonous matter and thereby the ptomaines.

To try to kill or prevent microbes in decomposed matter is to work for no purpose, because it is opposed to a fixed law of nature.

VACCINATION.

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The Eclectic School of Medicine owes its existence and position to-day to the fact that its origin was founded upon right principles of medication and strenuous opposition to the death-dealing methods of the dominant school of medicine fifty years ago and earlier, and it is my earnest desire to ever see it retain this position in the world. In less than fifty years we have seen the cup of cold water, for lack of which millions of human beings were tortured to death, come freely in use in the sick room to comfort, bless and restore the perishing. In the same time we have seen the massive dose of poisonous medicine largely done away with and its place taken by the small and pleasant pillet or potion, while the lancet, that Samson of destruction, has been almost totally discarded. 'Tis the grandest stride of progress in this progressive age, but our Homœopathic brethren divide the honors with us, since they have ever stood shoulder to shoulder with us in these reforms.

These evils just mentioned were monsters of destruction, but beside them stands a giant before which, in my own opinion, they pale into insignificance, and this is vaccination! This relic of barbarism and heathenism is a Juggernaut enthroned in the Temple of Esculapius and worshipped without reason by thousands of medical devotees who profess to stand as the healers and advisers for the good of the people. Some, of course, are honest in their position, but if they will study the question of vaccination honestly, intelligently, and without prejudice, they cannot escape the conviction that it is a delusion and a great evil.

Recently I read an article by a doctor, claiming "that the people were prejudiced against vaccination through ignorance, and that vaccination was the only means known to science that would positively arrest smallpox."

Personally, the only ignorance that I have ever seen displayed upon the question of vaccination has been wholly upon the side of the doctors, not the people, and the only thing known to science that will positively arrest the spread of smallpox is isolation and strict sanitary measures. Without these precau-

tions, vaccination is as powerless to check the disease as a coal barge would be to dam the Mississippi.

The motto of Eclectics has ever been to "sustain the vital forces," but when they stoop to vaccination they forsake their standard and place their weight upon the Allopathic beam by seeking to displace a very bad disorder with a worse one; for unquestionably vaccination is a tenfold worse scourge than smallpox, since smallpox invades the haunts of unsanitary surroundings and carries off thousands of people, while vaccination invades the sacred precincts of every home, high and low, clean and unclean, and by blood poisoning, syphilis, tetanus, erysipelas, catarrhs, consumption, caries, abscesses, scrofula, smallpox, and a multitude of other sequelæ, sweeps millions of human beings into untimely and loathsome graves.

Vaccination has been before the world for a good round century now, and those who have had unlimited experience with it for half a century declare that it in no way protects against smallpox; that it in no way mitigates the disease; that it is exceedingly dangerous to life and limb; that in some cases it propagates smallpox in its worst form, and that millions of people who do not die from the direct effects of vaccination are killed by some lingering disorder that forever after vaccination infects the system.

Dr. J. Emery Coderre, for thirty years physician to the Hotel Dieu Hospital, Montreal, Canada, declares that instead of protecting against smallpox, vaccination during an epidemic propagates the disease, and to prove his assertion cites no less than 112 cases of smallpox that developed from vaccination during the epidemic in Montreal in 1885. These cases were in young children mostly, and came directly under his personal observation.

Dr. George Gregory, director of the Smallpox Hospital in London, England, for fifty years, says that "the idea of extinguishing smallpox by vaccination is absurd and chimerical."

Dr. W. J. Collins, public vaccinator for twenty-five years in London, says: "I have not the least confidence in vaccination; it nauseates me, for it very often transfers filthy and dangerous disease without offering any protection whatever."

Dr. John Epps, director of the Jennerian Institute, London, after vaccinating one hundred and twenty thousand people, declares that "vaccine virus is a poison. It is neither antidote nor corrigent, but paralyzes the expansive power of a good consti-

tution, so that the disease has to fall back upon the mucous membrane."

Dr. Stowell, M. R. C. S., London, England, after practicing vaccination for thirty years, declares that "vaccination is not only an illusion but a curse to humanity."

Thomas Brett, M. D., of London, England, after fifty years of vaccination says that "he would not vaccinate his bitterest enemy, and that it is useless as a preventive against smallpox."

J. Mackenzie, M. D., F. R. C. S., of Inverness, Scotland, after being in active civil and military service for sixty years, says that "it is really shocking to see the numbers of medical men still busy extolling to their dupes that smallpox is lessened or extinguished by vaccination."

Dr. A. H. Caron, of Paris, France, member of the Academy of Sciences, says: "Vaccination is a bauble, gilded over by act of Parliament, but a bauble still, with which the doctors rock—too often to a fatal sleep—the gullible children of the world."

Sir Joseph W. Pease, Bart., M. D., M. P., says: "Children die under the operation of vaccination in a wholesale way."

Wm. Hycheman, M. D., of New York City, after forty years of practice, said on dissecting a dozen children that had died from vaccination poison, "that no smallpox, however black, could have left more hideous traces in malignant, foul, sloughing sores, rotten patches in lungs, spleen, mesenteric glands, kidneys and intestines."

Dr. Brereton, of Sydney, New South Wales, says: "In my experience I have seen more evils result from vaccination than I ever saw from smallpox."

Dr. Bock, of Leipsic, says: "I have in forty years' practice seen far more evil than good from vaccination."

Comparing these statements with a record of smallpox reports from different cities and countries and we find they are correct.

In 1871 Bavaria had 30,742 smallpox patients, and out of this number 29,429 had been vaccinated.

In 1871-72 Berlin had 20,391 smallpox patients, and of this number 17,038 had been vaccinated.

Between 1870 and 1886 the Metropolitan Asylum Board Hospital, in England, had 50,668 cases of smallpox, of which number 41,061 had been vaccinated.

These figures would prove to a statistician that Dr. Brereton's statement is correct: "Smallpox has steadily increased and

is increasing, as the practice of vaccination is more generally enforced."

I have to smile when some doctor gets into the china shop of statistics and smashes all the smallpox into smithereens with his loathesome pus from a poisoned calf. Unfortunately for the inquiring honest physician, there are no records kept, either by our public institutions nor by the different governments, in regard to the evil results of vaccination, consequently the only means that we have of comparing the evil results is from private sources. The registrar general of England, in his report of the results of twenty years of compulsory vaccination there says: "During this time there has been 121,147 deaths from smallpox. During the first ten years there were 33,515 deaths from smallpox, and during the second ten years there were 70,458 deaths from the same disease, or an increase of more than one hundred per cent, and after one hundred years of vaccination we find that smallpox is the same unmodified disease, and that it claims more victims now than before vaccination appeared to curse and destroy humanity."

Almost every doctor who tackles statistics alludes to the Franco-Prussian war, taking up the statement that Lord Playfair made in the House of Commons in 1883—for which there positively were no official medical statistics of that nature—that 43,000 German, or Frenchmen sometimes, died of smallpox during the war, and that since compulsory vaccination were enforced throughout the empire, in 1874, smallpox had declined to almost *nil*.

The facts are that both the German and the French armies had had compulsory vaccination and compulsory revaccination for a period of more than ten years before the war, and since upwards of 50,000 (?) soldiers died of smallpox in the two armies during the war, it is sufficient evidence that vaccination is no protection against the disease.

The reason why smallpox and all other zymotic diseases have so materially decreased in the German army and empire is because of the improved hygienic surroundings that have taken the place of the cesspools in the cities and barracks. Since 1874 the city of Berlin alone has expended more than $50,000,000 in improving its sanitary condition, and it is this sanitation, not vaccination, that has stamped out smallpox and all other contagious diseases. Cleanliness, individual, domestic, public and municipal, with plenty of pure air and water, wholesome food and

healthful clothing, are the most positive safeguards against smallpox or any other contagious disease.

In our own country we have positive evidence that vaccination is no protection against smallpox in our soldiers that are sent to the Philippines. These men are sometimes vaccinated as often as every three months, over and over again, and yet they contract smallpox and die in considerable numbers.

How any sane man, and especially a physician, can expect to modify or annihilate disease in a human being by taking septic material from a diseased animal and inoculating him with it I cannot understand. It is contrary to all reason and common sense. The medical profession to a man recognize the evil results, and ordinarily use all precautions to avoid contaminating the system with any septic material from any source, and especially septic material from an animal source, and yet openly advocate and practice vaccination, which is nothing more than a deliberate poisoning of healthy children and adults with rotten, septic purulence from a diseased bovine. And this vile putrescence from a festering animal is esteemed, in the name of science, a check, a mitigator, an exterminator of smallpox, when it has claimed more victims in the name of ignorance an hundredfold than smallpox can ever hope to. If all our medical science were as fatal as vaccination, the earth would soon be depopulated and left to the cows and Christian Scientists.

The only safe way to combat any contagious or infectious disease is the rational and physiological way. Cleanliness, pure air and water, medicinal prophylaxis and specific medication. With this pentacron we can meet any disease that stalks the earth successfully. Our patients will not be poisoned with any foul substance, and when we discharge them they will be as well as ever they were, and live to a green old age, if they observe the rules of health.

You all know about cleanliness, pure air and water and specific medication in the treatment of any disease, and in the case of scarlet fever you know the medicinal prophylactic. You know that small doses of belladonna twice a day will prevent a child from taking scarlet fever, although he be in the same room with another child who has scarlet fever from the beginning to the end of the disease. Thanks to our Homœopathic brethren for this bit of medicinal wisdom. Now, if belladonna will positively prevent the contagion of scarlet fever from developing in the system, there are other medicines that will positively pre-

vent the development of the other contagions in the human being, and it should be the supreme effort of every Eclectic in the land to develop and prove out these prophylactics that jugulate the different contagions. Leave vaccination to hades and the other school of medicine and do something that will be a benefit and not a curse to humanity.

Referring again to smallpox, I just wish to state that we have several prophylactics that are a thousand times more sure and safe than vaccination. First on the list comes sarracenia, that was brought to our notice by Dr. W. Morris, in 1861. This remedy no doubt possesses marked prophylactic and curative properties in smallpox, but it has been condemned by some old school fellows, who no doubt used an inert tincture or fluid extract made from the dried plant, consequently the results were disastrous. I hope that some Eclectic who has opportunity will test this remedy thoroughly in Lloyd's specific medicine. We know that it has virtue in measles because Dr. Lyman Pike tested it for years, and finally came to use it as a routine remedy in every case of measles.

The second remedy is the combination of digitalis and zinc sulphate, which is of French origin, and not only is a prophylactic and curative agent in smallpox, but is equally efficient in scarlet fever. A personal friend of mine says that it acts like magic in scarlet fever.

Vinegar and cider are both known to possess prophylactic and curative properties against smallpox, and should be tried thoroughly. I know from personal experience that vinegar is an antidote to the poison of diphtheria, and I have so much confidence in it that I use it in every case of that malady, and I have my first case to lose.

The latest remedy as a prophylactic against smallpox is melandrinum, or the attenuated virus of grease heel of the horse. This remedy has been used by several Homœopathic physicians in the 30x attenuation with marked success as a prophylactic against smallpox; also as an antidote to the virus of vaccine. So far the results have been all that could be asked.

Thuja is recommended, from the same source, as an antidote to and a prophylactic against smallpox.

Now, gentlemen, in the fair name of Eclecticism let us continue to lead in the matter of specific medication. Let us develop remedies, which we know in all reason exist, that are as specific in preventing the development of contagions as they are in curing

them after they have developed. Let us launch out anew in the study of medicine and bring forth specific prophylactics to aid and bless humanity and the medical profession, and leave the pestiferous vaccine matter to the physicians who will go on blindly poisoning their patients in the name of science and a fee.

In conclusion, I will point you to a few remedies that I have reason to believe possess prophylactic properties, partly from experience and partly from reading:

Whooping cough seems to be held in abeyance and sometimes aborted by small doses of salicylate of sodium, and in quinsy it has been positive so far as I have had opportunity to test it.

Diphtheria is said to be antidoted by our apis in the second x, that is if it is given as a prophylactic some days before. Lachesis is also another prophylactic. Arsen. iodide 2x is also said to be a prophylactic against malaria in all its forms.

Yellow fever is now known to be antidoted by arsenicum in the third decimal dilution. Salicylic acid is also another antidote. It should be given in small doses to the extent of five grains a day for a couple of weeks.

Measles is antidoted by sarracenia, pulsatilla, and in a few cases bryonia has stopped them for me when all the prodromal symptoms and the fever were on.

Try these remedies, gentlemen, and try others, and in the name of science let us develop and have specific prophylactics for all contagious diseases, to our honor and the blessing of humanity.

TOXINS.—THEIR ORIGIN, THEIR INFLUENCE, THEIR EVIDENCES AND THEIR TREATMENT BY A NEW AND RATIONAL PROCESS.

H. C. R. NORRISS, M. D., WINNETKA, ILL.

In order that my theory can be understood it is necessary to state the known physiological facts upon which it is based.

The Lymph and Chyle: The lymph is derived from the blood, and is composed of liquor sanguinis and white blood corpuscles; the chyle is composed of liquor sanguinis and fat droplets, coated with a thin layer of albumen, which are metamorphosed into white blood corpuscles before they reach the thoracic duct.

The quantity absorbed during twenty-four hours is equivalent to one-thirteenth of the weight of the body, and contains one per cent of urea.

The debris from muscular and nerve katabolism is absorbed by the lymphatics and passed into the lymphatic glands. These glands filter the lymph and do not permit the debris to pass on until it has completed the chemical and physical changes necessary to render it innocuous to the system. These glands do not seem to secrete any digestive fluid, and seem to contain but a filtering membrane and a large quantity of white blood corpuscles. Now, as there is no other element present in the quantity necessary to conform to the physiological requisites of the change from creatin to urea, the phagocyte must be the active element. We know that it is the only portion of our body that has a complete life history of its own; that it alone has the ability to move, to ingest or surround, digest and excrete another nitrogenous substance.

The same causes which result in the circulation of venous blood have the same effect on the flow of the lymph, namely, contraction of the walls of the containing vessel, atmospheric pressure, gravity, *vis a tergo* and external pressure due to the contraction of adjacent muscles. This latter element is advantageous, as the pressure of the vessels is bound to empty them and the valves prevent the lymph from flowing toward the periphery, consequently anything which interferes with the venous circulation has the same effect on the lymph flow and also impairs its functional activity.

Ptomains: Ptomains are always formed when the circulation is impaired, when nitrogenous food is introduced in excess of the needs of the system, and excretion is imperfect.

The conversion of nitrogenous food into urea, carbon di oxide and water seems to take place in the liver principally. If from any cause the circulation of the blood in any organ be impaired, the functions of that organ are impaired to a corresponding extent; therefore, if the circulation of the liver is impaired, the katabolism of the nitrogenous matter is not complete; we have formed, as one of the intermediate steps between a nitrogenous matter and its resolution into urea a vital basic alkaloid. The duty of the liver is to convert ninety per cent of the nitrogenous matter which is ingested into urea.

Leucomains: Leucomains are formed when the circulation is impaired by any means, and are the result of the incomplete

katabolism of the debris from function of the muscular and nerve tissue. I believe that sarcosin and leucomains are closely allied, if not isomerous substances, as neither of these substances is formed if the phagocyte retains its normal powers and oxygen and nitrogen are supplied in the usual quantities. Both are derived from the same source, and normally enter into the formation of urea.

Toxins: Toxins are formed during the course of all infectious diseases and are the result of the pathogenic micro-organic disintegration of nitrogenous tissue. Now, if the phagocyte possessed its normal powers it would convert the toxin-producing element into urea, and the oxygen and nitrogen would do the same with the toxins. Eliminate the ptomains and lecomains and you can form an approximate estimation of the pathological activity of the pathogenic micro-organism by the temperature, which is caused by the conversion of the toxin into urea by its oxygenation and nitrogenation, and you determine it exactly by the increase, over normal, in the quantity of urea excreted.

Effect on Circulation: The first effect of the presence in the system of either of these alkaloids is to cause a paresis of the cardiac and vasomotor nervous centers, from some specific action which they have upon the sympathetic nervous system. Previous to this paresis the arterial vessels are elastic and dilate just enough to permit the heart to force its contained blood into the aorta, and thus contract completely, and this blood should be removed by the capillaries. As fast as it is introduced the muscular coats of the arteries and arteriolas contract, thus keeping a constant, even pressure at the periphery, which is required to maintain the flow through the capillaries (which are 1-3000 inch in diameter).

After the paresis there is an inelastic tube which does not intermittently dilate and contract to compensate for the difference in the amount of blood contained in them previous and subsequent to the contraction of the heart; and instead of an even pressure at the periphery there is an intermittent one, and as the capillaries are surrounded by compressible tissue and have lost their contractility, the capillaries are distended and the capillary circulation is retarded. That retardation is reflected back through the arterial vessels, and as the arteries are already over-distended the heart cannot throw the four ounces into the already over-distended aorta and cannot complete its contractions, and, being incomplete, the cardiac cycle requires less time. The heart, in

its efforts to restore the normal circulation of the blood, increases the number and force of its pulsations. This we call compensation of the heart.

In spite of the hypertrophy and increased pulse rate the metabolic equilibrium is not restored; if it were, the capillary çirculation would be normal and the heart would functionate normally, regardless of the length of time the organic lesion has been present.

The retardation of the arterial blood in the left ventrical is, of course, reflected back to the left auricle through the pulmonary vein, and a passive pulmonary congestion ensues. Any interference with the pulmonary circulation interferes in the same proportion with the oxygenation of the blood; any interference with the oxygenation of the blood interferes in the same proportion with metabolism.

Effect on Nerves: The following three basic alkaloids are unstable and are in a state of transition into what will ultimately become urea. These three all have the same effect on innervation. The first is always ptomaines, the second leucomains, and if the patient is exposed to an infectious disease, the third or toxins appears. The ptomaine causes paresis of the sympathetic system, and as a result the metabolic equilibrium is lost and the circulation is impaired. This impairment of the circulation impairs the innervation of the entire system and permits the formation of leucomains, which act exactly the same on the sympathetic as the ptomains, and will cause formation of ptomains. Toxins also have the same action. If by any manner of means it should be first, in a short time we have the other two present.

Here we have a most vicious triangle, each element of which predisposes to the formation of the other two and increases the activity of each of the others.

Effect on the Muscular Tissue: The contractility of the muscular tissue is lost unless there is an adequate supply of good arterial blood. So-called heart failure is a loss of the functional activity of the cardiac muscle, due to a deficiency in the supply of arterial blood, and as a result of this deficiency the muscle cells lose their power to respond to stimuli. Their nutrition is deficient and their function is impaired by the presence of debris, either as creatin or sarcosin, or both. These have the same effect as any other adventitious matter would which was contained in the muscular tissue. The presence of these two substances in excess is due to the failure of the lymphatics to functionate.

Urea: The debris of the functional activity of muscular and nerve tissue is known as creatin.

Creatin C_4 H_9 N_3 O_2 plus H_2 O and functional activity of the white blood corpuscles equals C H_4 N_2 O plus (sarcosin) C_3 H_7 N O_2. (C_3 H_7 N O_2), 2 plus N_2 O_9 equals (C H_4 N_2 O), 2 plus (C O_2), 4 plus (H_2 O), 3 Two and one-half per cent of the blood is composed of nitrogen gas. Fifteen grains of cretin—a very fickle compound—loses its molecule of water and is eliminated as cretin. This cretin is the result of katabolism in the urinary tract; where it is not exposed to the white blood corpuscles this is the only place creatin is eliminated in this condition. and it is also the only place where it is not so exposed. We know that oxygen and nitrogen exist in the blood—oxygen in the corpuscles, nitrogen as a gas in the plasma. We know, also, that this conversion of creatin into urea, carbon dioxide and water is taking place all through the body, all of the time, and that the only substances always present are oxygen, nitrogen, plasma and phagocytes. We know that the chemical change of creatin into urea, carbon dioxide and water requires, through chemical equivalence, the addition of the elements nitrogen and oxygen. No one questions the fact that the oxygen freely enters into combination to aid in this chemical transformation; and why should we doubt the ability of nitrogen, which exists free in the blood, and which would not be present if it had not this function to perform? I believe that sarcosin is acted upon by the oxygen and nitrogen in the blood in the way I have stated, because when from any cause the æration of the blood is interfered with sarcosin develops very rapidly and the formation of urea is retarded. The phagocytosis would continue some time after the supply of nitrogen and oxygen was cut off, but the chemical change of sarcosin to urea, carbon dioxide and water would cease the moment the supply was cut off and that present was exhausted; and one per cent is excreted by the skin, not as cretin, but as urea, proving that contact with the air completes the chemical change.

Urea is a harmless, stable nitrogenous compound, and its presence in the blood does stimulate the kidneys to functional activity, regardless of the blood pressure or nerve supply. This is proved by severing the medulla oblongata, thereby entirely stopping the secretion of urine. If urea be injected into the blood there will be a copious secretion and excretion of both the solids and the fluids of the urine, proving that the living cells

of the convoluted tube of the malphigian corpuscles constitute a true secreting membrane and are stimulated by the specific action of the urea upon its vaso-motor centers, and that the so-called uremia is not due to the presence of urea in the blood, but rather to its absence. If we cause the urea to be formed, the kidneys will eliminate it.

Carcinomas, Sarcomas, Epitheliomas, Etc.: Cancers develop in areas which, from some mechanical cause, have a defective capillary circulation, both of blood and lymph. This defective circulation interferes with the conversion of creatin into urea, carbon dioxide and water, the phagocytosis converts the creatin into urea and sarcosin, the sarcosin rapidly becomes sarcolactic acid, which is an irritant and causes a distortion of the tissue cells.

These are the only conditions always found in cancers. The tissues in which the sarcolactic acid develops give their name to the growths. Examine closely any patient with a malignant or benign growth, and you will always find the evidence of carcolactic acid; watch any patient with a bad case of chronic ptomain poisoning, and sooner or later you will see a benign growth develop, which will in time become malignant.

The treatment outlined in this pamphlet will eliminate the carcolactic acid present and prevent its reformation. In any bad case it might be as well to send me a complete history, with results of quantitative urinalysis, and very complete examination of the heart; then I could, perhaps, suggest the amount and kind of the glycero-phosphates and the form and number of exercises by which you could get the best results. In a week's proper treatment you may expect decided improvement.

Tuberculosis: Tuberculosis is an infectious disease caused by the presence in the system of the tubercular bacilli. This presence is tolerated only when there is an impairment of the phagocytic power of the white blood corpuscle. It is a well-known fact that a normal white blood corpuscle will destroy the most virulent tubercular bacilli, and that a normal tubercular bacilli will destroy a white blood corpuscle that is deficient in virility.

Autopsies have proved that there are more recoveries from tuberculosis than from any other disease, and that there are very few of us that have not at some time of our lives had tuberculosis, and that a great number of our babies die with it, though it is not diagnosticated during life.

The rational treatment is to increase the number and viability of the phagocytes. This can be done by introducing the elements of the corpuscle synthetically prepared, namely: glycerophosphates of sulphur, iron, calcium, potassium and sodium. But in a lithæmic patient with an excess of calcium, sodium and potassium, I would not introduce these elements, but about three grains of the glycero-phosphate of sulphur and two of the glycero-phosphate of iron. With these glycero-phosphates I would give glycerin and phosphoric acid and plenty of distilled water (pint to each forty pounds body weight every day), expecting from the known affinity it has for these elements that I would cause the formation of the glycero-phosphates in the body.

Knowing that faulty metabolism of nitrogenous substances is at the bottom of our trouble, and knowing that the digestion is impaired, and knowing that if nitrogenous matter be not digested it decomposes and forms ptomaines; and as it is toxins and leucomains we are combatting, and all have the same effect on the system, we will entirely stop the ingestion of nitrogen, depending on the nitrogen that is present in the air to complete the transformation of sarcosin and sarcolactic acid into urea, carbon dioxide and water. Any deficiency in the ingestion of nitrogen is made up by this action.

The diet should consist of food which, decomposing, forms no especially deleterious compounds. The carbo-hydrates, by decomposing, come but little beyond carbon dioxide and water. On a meat diet there is four times as much nitrogen gas in the alimentary tract as there is on a vegetable diet, and practically all of this must be eliminated as urea.

In a case of enteric fever, from the ingestion of one ounce of milk, diluted, I had a rise of ten in the pulse and a degree and a half in temperature in two hours. On the ingestion of three drams of poached egg albumen I had a rise of twenty in the pulse and three degrees in the temperature. Both times there were all the symptoms of a reinfection. I gave carbo-hydrates, with no symptoms as a result.

I would suggest a high enema of normal salt solution in the knee-chest position twice a day to increase excretion and keep the colon evacuated, in this way keeping down reabsorption. Once a day a soap scrub bath, as one per cent of urea is eliminated by the skin.

Follow this treatment for three days. It takes this time, usually, to eliminate the ptomains. All of the symptoms will

by that time be practically under control. The length of time required to remove the tubercles will depend entirely on their amount and the length of time they have been present. But you can remove them in a comparatively short time, as you have absolute control of elimination. As the circulation is impaired in this as in all other infectious diseases, I will outline a mechanical means by which you can remove all the back pressure from a heart where there is a complete valvular insufficiency, and at the same time increase the lymph flow, as what increases the venous flow does the same with the lymph.

The treatment which I desire to bring before you is one of passive movements only, calculated to assist the flow of the venous blood through the capillaries, and thus greatly influencing blood pressure, encouraging oxidation and stimulating the excretory function of every organ.

We must be cautious that we do not only cause a flow of venous blood, but also that we do not cause a regurgitation of the arterial. We must be sure we understand the theory, or we may do harm. We should watch the character of the pulse closely. The room must be warm. All clothing is removed.

Place the patient on the back, with no pillow under the head. Extend the arms by the sides, the palms in contact with the thighs; legs straight, all muscles relaxed. Instruct the patient to breathe slow and deep, but to make no great effort to do so; resume and maintain this position for a minute between each movement.

Apply gentle friction over the heart, with warmed hands, gradually working your way to the extremities; always rub towards and to the heart when working on the torso; when on the extremities, to the torso.

Examine the pulse after each movement, and stop the treatment the moment improvement ceases, unless the bad results follow raising the arms rapidly or too high. If that be the case, elevate the leg and permit a longer rest, being more careful in the future. To get the desired results you must move members slowly and not permit them to flex.

Do not permit the patient to assist you in raising or supporting the limbs.

1. Rotate the left hand without raising it or moving the arm from the side, or flexing the hand or the wrist. Rest.

2. Rotate the right hand the same. Rest.

3. Pass the fingers slowly, with some slight pressure, from

the occiput to the clavicle, following the posterior border of the sterno-clydo-mastoid, thereby expressing the contents of the occipital and posterior jugular veins. Do this twice. Rest.

4. Rotate the left leg without elevation. Rest.

5. Rotate the right leg the same. Rest.

6. Pass the fingers from the vertex to the clavicle, passing the sterno-clydo-mastoid at the angle of the inferior maxillary, expressing the contents of the supra-orbital, the temporal, its branches and the external jugular. Do this twice. Rest.

7. Pass the fingers along the inner aspect of the left humerus, expressing the contents of the brachial and axillary veins; then span the wrist with the thumb and forefinger, and pass slowly the entire length of the arm. Repeat both; then rest. By the latter movement you express venous blood from the radian, median, ulnar, basilic and cephalic veins. Do not elevate.

8. Right arm the same. Rest.

9. Begin on the left leg; express the venous blood from the long saphenous and femoral veins by passing one hand from the insertion of the sartorius to Scarpa's triangle; the other from the popliteal space to the great sacro-sciatic foramen; then begin at the base of the great toe, pass one hand along the inner aspect of the tarsi, anterior to the inner maleolus, from there to the insertion of the sartorius and to Scarpa's triangle, compressing the long saphenous. With the other hand start from same place, pass along the outer aspect of the tarsi posterior to the external malleoli, following the short saphenous along the outer side of the tendon of Achilles, then over the gastrocnemius to the popliteal space; from there to the great sacrosciatic foramen; twice. Rest.

10. Begin at the outer canthi of the eye, one finger above and one below the ball of the eye, to the nose. Follow the facial vein to the insertion of the masseter muscle, then straight down the neck, compressing the jugular, which is about an inch anterior to the external. Do this twice. Rest.

11. Elevate and support at an angle of forty-five degrees the left arm. Repeat No. 1 and No. 7. Lower and rest.

12. Treat the right arm the same as No. 11. Rest.

13. Same as No. 3.

14. Elevate the left leg and support it at an angle of forty-five degrees. Repeat No. 4 and No. 9. Rest.

15. Treat the right leg the same as No. 14. Rest.

16. Rotate the head. Repeat No. 3 and No. 10. Rest.

17. Elevate the left arm and support it at an angle of forty-five degrees. Have the patient open and close the hand slowly. Repeat No. 7. Do this twice. Rest.

18. Treat the right arm the same as No. 17. Rest.

19. Elevate and support the left leg at an angle of forty-five degrees. Have the patient flex and extend the foot. Repeat No. 9. Repeat this process. Rest.

20. Treat the right leg the same as No. 19. Rest.

21. Rotate the body laterally on the pelvis. Rest.

22. Place the hands over the kidneys, partially raise the torso, permit it to slowly slip through the hands, bringing pressure to bear on the entire abdomen. Do this twice. Rest.

23. Flex the body on the pelvis. Cover the patient throughout and allow rest for half an hour in absolute quiet. Do not disturb to put on the clothing.

DAWN OF CONSCIOUSNESS.

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I have the four following theses to offer upon this subject:

1. Consciousness is primarily a more or less continuous impression upon the organic cell made by its environments.

2. If it is sufficiently pronounced to remain for a time and repeat itself, it is called memory.

3. The comparing of two impressions by means of a third is called reason.

4. The various normally developed senses, returning their many impressions to a highly sensative sensorium in the gray matter of the brain, creates a continuously active state, called conscious intelligence.

All matter is endowed with molecular motion, the quantity and quality of which differentiates it into the various kinds of matter which we recognize as such. Substances having an imperceptible immeasurable motion, and characterized by inertness, are called inorganic. They are usually described as cold, hard, or insensible. The simplest of these substances are called elements, of which there are about seventy in number, each one having special characteristics. In combinations their number is legion. There is a class of such which give striking characteristics, notably carbon with hydrogen, nitrogen, phosphorous, sulphur, and

occasionally others. The particular one of most intense interest is the highly organized protoplasm formed from the above elements in slightly varying proportions. It is a soft, gelatinous speck of jelly-like mucous, transparent, colorless, and endowed with a set of characteristics peculiar and extraordinary, consisting of a visible power of motion, growth and reproduction. In fact, all those characteristics that are collectively denominated vitality, life, etc. This in an organized form is known as a cell. It is entirely without any hard or formed parts—a live, quivering mass, an organism without organs, power and energy without nerves, and yet it is an organized being. It is the first principle of life, and that of which all living things, whether animal or vegetable, are composed. The lowest microbe or the highest man differ only in the number, method of differentiation and disposition of these cells.

In that minutest speck of life, called eozoon, monera, or amœba, etc., nature has not yet differentiated between the vegetable and animal kingdoms. If the cell takes on a plasmodomus method of assimulation, then a vegetable is determined. In this process carbon-dioxide and ammonium compounds are absorbed and oxygen expelled. This is a process of reduction. These beings are collectively called protophyta, and are the ancestors of all plant life. If, on the other hand, nutrition is performed by the plasmophagus method, where the being acts as an oxidizing agent, which is chemico-analytic or heat and energy producing, then there is an absorption of oxygen and elimination of carbon-dioxide and ammonium compounds. This is a real process of oxidation. Different kinds of matter are distinguished by their permanent inherent characteristics. Vitality is a term that covers many characteristics of so-called organic matter, particularly cellular tissue. One phase of vitality is the retention of impressions; which is parallelled by so-called inorganic matter in magnetic iron ore. The example of the electric needle is familiar to all; in this case it is the fundamental molecular motion which is exhibited constantly in a variety of ways. The ancient Aryans called it the lower manifestation of the Infinite Spirit. The plastidules of the cells being complex and highly organized, to them is naturally given a higher rate of molecular motion, it being the sum of all the separate atomic motions increased by the force of their chemism. The power or energy is exhibited by their combination, whereas the power of a galvanic battery cell is exhibited by a decomposition of its com-

pounds to lower terms. In carbon compounds, the more intricate their arrangement and combinations, the greater is their intermolecular or vital motion. Some of Herbert Spencer's conclusions are applicable here: "Generally speaking, stable compounds contain but little molecular motion; and in proportion as the molecular motion is great the instability is great. Stability decreases as temperature increases." "Elements containing much molecular motion make unstable combinations, and *vice versa.*" Gaseous matter implies much molecular motion, solid matter the reverse. The molecular heat of a compound increases with its complexity; so does its facility of decomposition. "Matter exists in two solid states, crystalloidal or union of individual atoms and molecules, and colloidal or union of groups of atoms or molecules."

Nitrogen compounds are most peculiar in combination; they are especially unstable, having great quantities of accumulated motion. In combining with other elements nitrogen absorbs heat, while others give it out. Nitrogen not only carries its own motion into combinations, but also what heat-motion that it can absorb from the surrounding media. Now, if the other elements in the combination are also gaseous, having each considerable motion, then a large amount of motion is locked up in the compound. When suddenly decomposed, this energy is displayed in more or less violent explosions. When released slowly, putrifactive odors are the result; also expressions of catalysism, as are seen in the enzymes. The protean molecule condenses a large amount of motion in a small compass, as three out of four of its elements are gaseous. The clusters of organic matter have independent motion over each other. "All organic aggregates have an insensible heat, keeping them warmer than inorganic substances. There is also a large amount of motion in the water that permeates organic matter." This helps to a greater mobility or the matter suspended in it and preserves the plasticity of organic matter. If freed suddenly, each element of the human body would assume its normal volume, which would occupy hundreds of times its present volume. "The essential characteristics of living organic matter is that it unites this large quantity of contained motion with a degree of cohesion that permits temporary fixidity of arrangement." Motion is inherent in matter; heredity directs it progressively to more or less perfect ends.

Impressionability is characteristic of all gelatinous masses. Activity is characteristic of vitality. Vital matter is capable of

reacting in response to action, hence reaction against the every environment is sufficient cause for activity. This may be called reflex activity, inasmuch as it requires no organized sense center for its expression. The reaction may not and does not necessarily follow immediately, hence the reception and storing of impressions within the homogenious structure would seem very like memory, and still be simple chemical reflection.

In the thousands of unicellular plants and animals this storing and exhibiting of impressions is most beautifully illustrated in their numberless forms and shapes, arranged for convenience, beauty and protection. The great variety and beauty of the skeletal forms of radiolaria, polyps, sponges, corals, etc., are in evidence. Haeckel has described more than 4,000 kinds of radiolaria, every single species of which is distinguished by some special structure. These radiolaria are simple cells, their skeletons are elaborate and beautiful. Each species adheres to and transmits its own type. The impression of its form (form memory) has become permanent and hereditary. Each variety transmits these stored impressions to its offspring, which keeps the general form with little or no variation during constant environments.

As each cellular offspring receives its form and characteristics from its parent, it absorbs nutriment the same way as its predecessor, thereby increasing its own vital force and power to transmit the same to its offspring by budding of cell division. This may be called reflex or unconscious memory. Quoting from the work of Spencer and Romaines we find that "stimulents applied to homogenious protoplasm, undifferentiated, which is everywhere contractile and nowhere presents nerves, has the effect of giving rise to a visible wave of contraction, which spreads in all directions from the seat of stimulation as from a center. A nerve, on the other hand, conducts the stimulus without undergoing any contraction or change of shape. Some parts of the protoplasm are more frequently exposed to certain kinds of forces than other parts of the mass, hence this differentiation."

"The more frequent waves of stimulation radiate from the more exposed portion of a protoplasmic mass, the more will there be a sort of polarization of the protoplasmic molecules lying in line through which these waves pass, which will offer continuously less resistence to these currents, until at last the molecules have so far condensed that they are what we call nerves."

At the lowest stage of organization the whole cell is sensative to external stimuli. This is the case with the simplest protista, which are rudimentary plants and animals. Later on a differentiation takes place. In the multicellular bodies of many metazoa, polyps and corals, where protection is offered for each cell by its neighbor, a sensative cell is seen on the surface of many. When this spot is stimulated the opposite end of the cell contracts. This appears to be due to the mechanical effect of transmission by conduction, a property common to many kinds of matter.

A step higher is noticed in the swimming medusæ, where two cells are included in the activity, one an outer or skin cell, prototype of a sense cell; the other an internal or muscular cell, deep within the mass. These are connected by a fine fillamentous bridge. This is the second or bicellular stage of psychic evolution, a true reflex irritability with differentiated cellular organs. Further cellular differentiation has placed a third cell between the sensory and motor cells. This one takes the place of the filamentious bridge, and receives the impression as a sensation from the sensory-skin-nerve-cell, and transmits it by conduction to the motor cell in the shape of an order for action. This is a primary ganglionic cell, and its function is called psychic. It is a preliminary brain. Like the potter's wheel, it receives the formless material and returns a finished product.

Higher in the process of evolution many differentiated psychic cells are placed between the finished sensory and motor cells. These, in their more intricate combinations and reflex mechanisms, produce the higher vertebrates, and hence man. Sensations are received, held and returned by the "psychoplasmic" function of the cell. This unconscious reflex memory is common to all organic life; many animals have no other incentive for action. This also makes up a large majority of man's ordinary movements. From infancy to old age, by far the largest part of all human actions are reflex. The first cry of the infant, its digestion, and all other movements are the reflex actions resulting from the impressions of its new environments and the irritability of its highly differentiated cellular-nerve arrangements.

Analyze for a moment a few of the very common and usually unnoticed actions of everyday life. They have left no trace of impression upon memory; they have not even reached the associated faculties. What of ordinary walking, eating, di-

gesting, common speaking, and all ordinary functionating of the bodily organs? They leave no impression further than that of a periodic mechanical reflex upon the lower sympathetic ganglia. All animal life of the lower orders are still living in this unconscious active state. When multicellular psychic cells have so far differentiated that each separate sense center is properly developed, and will respond to that stimuli furnished by its corelated external sense organ only, the association of independent impressions in contiguous highly specialized centers will be a sufficient foundation for those faculties usually called comparative, which play so important a role in the social life of man.

So much of ordinary human life has become hereditary and, requiring no mental action, is mechanical and reflex, it is probably well that such is the case; otherwise we would be under the necessity of spending most of our time attending to the minor details of life. A large portion of mankind are little more than living reflex machines, and as such are not far removed from the lower animal. Many are less capable of self-support than many of our animal ancestors. When once the multicellular arrangement has been thoroughly developed, then all mental processes are possible and all knowledge attainable. For so strong is the law of heredity, mental as well as physical, that any variation from the straightforward path of evolution is impossible. All reflex vitality, with its retaining and periodic properties, are called unconscious memory, and this is instinct.

When the power of comparing associated reflexes is developed, then conscious memory is possible, and this is reason.

Hunger and love have been denominated the fundimental instincts. Now, let us look into the primary instincts or motives of cell life and see the first emotions. The simplest thing that lives is the primordial cell. It is a compound of inorganic elements existing, like every other compound, by virtue of the law of chemism and its particular form of motion. The special properties wrapped up in this combination are called vital, one of which is the attraction to itself of matter of a similar but not necessarily identical kind. The elements of such material are absorbed, rearranged and deposited; otherwise said to be assimilated.

The same or a similar process occurs in the electro-deposit plating and other electro-chemical phenomena and crystalography. The galvanic current will separate and deposit or

assimilate many kinds of elements, about which there is nothing mysterious. The law of substance, including attraction, repulsion, adhesion, cohesion, gravitation, chemism and electricity, comprehends all such operations. The term hunger is unfortunate in being intimately associated with an animal appetite, yet in its essense it is nothing more than mechanical and chemical affinities. In such a sense, shorn of all artificial draperies, it becomes admissable.

Now for the proposition of love. Again returning to the first principles, what do we find after cell growth? Multiplication. In the protozoa this takes place by fission, gemmation or spores; in other words, the nucleus, having reached its physical limit, falls into halves by its own weight. Each nucleus being a center of attraction, will draw the plasma about itself. Each half now becomes a new cell. The new cell will increase and multiply in a way similar to its ancestor. In the metazoa, multiplication is accomplished by sexual congress. This is peculiar to the secondary stage of animal life, and it is here reflex and unconscious in the first stages. Now, if love is, as many contend, dependent upon the differentiation into sex, it is not a fundamental instinct. Unconscious propagation is a form of self-preservation, and it is fundamental.

Differentiation of cells into sense organs occur in the higher metazoa. This multicellular stage, where many psychic cells are interposed between the sensory and motor nerves, make conscious motion and reason possible, and this only at the fifth stage of psychic evolution.

Attraction and repulsion are fundamental chemical and mechanical attributes; they pertain to a greater or less extent in all substances. This is simple chemism. In organized bodies this becomes sensation and motion; on a higher animal plane it becomes like and dislike, primitive emotions. This is also translated desire and aversion, which in high ethical sense is love and hatred. In that attraction and repulsion of chemism we also have a very pronounced method of selection of what is suitable or desirable and rejection of other material. To obtain what is desirable, natural or chemically suitable, is to attract pabulum and grow. To grow is to propagate. Just here we observe an element of will or power of putting into execution those elemental functions. This is powerfully expressed in the chemical and physical world. Movements in potential become emotions in the highly developed animal. In their elementary

condition their motives are few, simple, and not different from mechanical and chemical effects. In their highly developed state the emotion, when intensified, become the ruling passions. In many cases the passion becomes so strong as to overpower and submerge the will entirely.

The kenetic energy of physics and the power of chemism are universal properties of matter. The latent power that is wrapped up in the molecule of an organic cell, that makes it grow and develop into all that follows thereafter, is the same universal force that is comprehended in the fundamental law of substance. By that law all nature becomes force and matter, indestructible and everlasting. Some philosophers have reduced these two ideas to one, and that is "dynamism."

Will is a center of force or energy around which matter accumulates to form an atom, a world, a sun, or an individual. The automatic reflex movements are a part of the same potential energy of space, of a nebulæ, or a planet. When the all-pervading Spirit has permeated matter, when energy has wedded substances, the combination has a set of characteristics that are called life.

Man is the latest development of that unity. He is but a bundle of energies, the sum of all cell energies reinforced by that strength in unity, and power or faculty or accumulation, condensation and storing of energy. When all of this magnificent association of highly differentiated cells have ceased to act in harmony, and the sublime mechanism called man has ceased to exist as such, the accumulated physical energy returns to lower grades of life, animal or vegetable, or further back to that eternal source of all life, before it starts again on its well nigh everlasting round of birth, life, growth, death and decay.

All mental accomplishments, intellectual or emotional; all transcendental philosophies and thought power, eventually return to its original source in the inter-ether, or some other such place, there to remain quiescent until again drawn into motion and evolve, perhaps, to a high and noble estate. This psychic essence of the emotions that is left when death occurs is the balance sheet condensed to a minute proportion, capable of redevelopment in another human form.

In old age cellular decay is followed by mental stagnation. It may be a slow wearing out of the tissues and general evaporation of energy as we see in all old individuals of every variety.

All that live must die, but death is life again. "This body is but the placenta that holds us to earth."

Where that secondary development pertains such as we find in those creatures that have a bi-cellular nerve arrangement, the will force is unconscious. It is not until a third cell—called psychic cells—that conscious will is possible. The greater this multicellular arrangement—in other words, the better the differentiation—the more perfect will be the will power.

Haeckel says: "When we examine the will in the light of comparative physiology and evolution we find, as we do in the case of sensation, that it is a universal property of living psychoplasm." "The automatic and reflex movements which we observe everywhere, even in the unicellular protists, seem to be the outcome of inclinations which are inseparably connected with the very idea of life. Even in plants and the very lowest animals, these inclinations, or tropisms, seem to be the joint outcome of the inclinations of all the combined individual cells." Will is a phenomena of voluntary movement.

The question of freedom of the will has been one of great moment, and has occupied the minds of deep thinkers for centuries. The church and materialists have both given judgment against it; the monist and some psychologists for it. After more than two thousand years this great struggle is still unsettled. The human will seems to have no more freedom than that of the higher animals, from which it differs in degree only. On evolutionary lines determinism is established by phylogeney and ontogeney, while the Hindu philosopher points with just pride to their Yogis, who seems to have established a perfect freedom of the will.

Every animal above the protozoa is the result of the blending of two simple single cells. The human female ovum is one one-hundred and twenty-fifth of an inch in diameter, the male spermatazoon is not nearly so large. Each cell has its own peculiar characteristic motion or cell energy; the blending of the two makes a third cell, independent and different from either one, with characteristics of both parent cells, and a new or secondary motion, resulting from the impact of the primary motions. Just here a new theory of sex may be established. If the motion of the spermatozoon be the stronger, the male sex is established; if *vice versa*, then the female developes.

All the material, physical and mental, characteristics of the parent cells are transmitted by heredity. According to monistic

materialists, a new soul is also born at this supreme moment. Some other philosophies make this the simple gateway for the entrance and manifestation of an eternal entity, the soul, on the physical plane. And this becomes plausable if one concedes a soul to be an individualized center of that universal force that is comprehended in the fundamental law of substance.

This "force center" soul may be considered to have evolved to an extremely high rate of vibrations.

The heredity of form and features are carried on within extremely narrow limits of variation. The elements of human kind cannot produce a monkey, or any other mammal but man. Elements of kine will not produce swine. Animals of different type never copulate. If such should be the case there would be no impregnation. In form and features all beings follow their ancestors, with only those slight variations due to progressive evolution.

It is well known that children inherit the physical and mental peculiarities of their parents, such as temperament, talent, acuteness, habits, desires, general form, and diseases to a large extent. Thus far heredity can be ascribed to the laws of physics and chemism. The nuclei of the cells unite for the formation of a new being; this makes the mortal birth of every individual animal, man included.

From the moment when the parent cells have coalesced, all there is of the individual has its beginning. All that after development of physical and mental characteristics starts here. "The cell contains all of the potencies of its parents condensed in the nucleus. This being the concentrated essence of the whole being of both parents, it is that which carries and transmits racial form and all hereditary traits. The plasma, that soft, impressionable part of the cell, carries all of the acquired traits, and as the material of the plasma is gradually absorbed into and goes to make up the nucleus, so acquired traits are to a certain extent absorbed toward the center, thereby becoming more or less hereditary.

The quality of permanency of this kind of heredity depends upon how near to the center of the nucleus the plasma arrives without losing its character as plasma. Thus it will be seen that the cells are the receptacles for the absorption of hereditary characteristics, or cell consciousness, and that each cell developing from the first one carries an image of it. These cells cannot carry anything they do not receive from the parent cell except

those acquired traits, that are not usually transmissable. What is transmitted is first and always racial characteristics.

In all mammal life the procreative principle and functions are profoundly protected; the offspring is carried within the maternal body until perfectly developed. This insures a large amount of heredity. Such variations as we frequently see in the same family are partly due to the variation of mental and physical conditions of the parents at different conceptions.

Consciousness, or internal perception, has been considered the central mystery of psychology. Haeckel makes it a property of matter, and subjects it to the law of substance, just like any other substance. Prof. James says: "The sense of sameness is the very keel and backbone of consciousness." There are two aspects of consciousness, first the non-ego or external experiences, secondly the ego. In this latter case the investigator finds himself in the unique position of investigating the investigating faculty with itself—the object and subject are one.

It is agreed by anatomists that the four principle sense organs, or four inner spheres of sensation, are the sense of touch in the vertical lobe of the brain, smell in the frontal, sight in the occipital, and hearing in the temporal lobe. Between these four sense centers lie the four great thought centers, or centers of association, the organs of mental life, "the most important of which is the great occipito—temporal center of association. The structure of these centers in man differ from those of all other mammals. The proof of this statement is easily confirmed by a study of pathological lesions of localities of the cerebral mass. Injury to or interference with any local center will always alter or destroy its function. Stimulants or opiates will interfere with them. Consciousness may become permanently altered from anatomical and functional lesions in any of the four principal centers." It is admitted that when parts of the brain are injured or diseased there is a corresponding loss of the functions of the mind.

Systemic alimentation and normal circulation of good blood are essential to proper mental and psychic exhibitions. The slow mental development of the young child, and slower degeneration of senile decay, all go to show how essential is the anatomical and physiological state of the brain for normally developed consciousness.

All knowledge and belief depends first upon sense action, and second upon the association of those impressions into presen-

tations. The reception of all impressions is through the sense organs. They are the same throughout all higher animals, all having had the same historical evolution. Sense organs were originally part of the skin. The sensitive cells of the epidermis is the source of all these organs, which have developed by adaptation to stimuli of heat, light, sound, taste and smell. The rods of the retina, the auditory cells of the cochlea, the olfactory cells, taste and touch cells, were originally the same as any other part of the surface. This can be directly observed in the embryonic development of all higher animals, and is part of the grand system of evolution, the phylogenic development of the animal kingdom.

Different nerves are qualified to perceive special sensations only; as the optic, olfactory and auditory all differ in this particular. After millions of years the differentiation is complete, and heredity, with adaptation, will carry on this work to higher perfection in the distant future. Man is not nearly the most perfectly developed animal in so far as his special senses are concerned. Compare the eye of the eagle, the hearing of the dog and his scent, as well as other carnivori. The fish have a sense of pressure not developed in man or any land animal.

In concluding these arguments I wish to call attention to the thoroughly evolutionary basis upon which they are formed. The evolution of the soul from the animal, where I have left it, to higher planes, will be taken up in the next paper of this series. I have frequently quoted from Haeckel, Romaine, and others.

THE PRACTICE OF MEDICINE THEN AND NOW.

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The subject for this paper was suggested by one of my patients, whose life had been despaired of. I employ very little medicine in the treatment of disease, and this gentleman informed me that he thought there had been very little advance made by physicians who used medicines for the supposed cure of disease. When he presented himself to me for treatment he weighed 134 pounds. That was November 1st, 1901. I treated him daily during November, December, January, February, and in March twice a week, when I discharged him, cured, weighing 175

pounds, and proudly saying that he "never felt better in his life" than he did then and does now. I gave him no medicine.

The physician who had been attending him gave him solid food, that was rejected as it was taken, undigested. I put him on liquid food, Valentine's beef juice and Horlick's malted milk. After the first month I permitted him to take chicken broth, with grated carrot and onion, thickened with rice, but no chicken. He could not sleep when he came to me. Before he left me he would go to bed at 9 p. m. and sleep refreshingly until 7 a. m. I gave him nothing to produce sleep, except food that he could digest and assimilate. I treated him by electricity only. Now he eats what his appetite craves, and asserts his ability to eat and digest a ten-penny nail if he should crave it.

I am the fortunate possessor of *"The English Physician, Enlarged,"* with three hundred and sixty and nine medicines made of English herbs, that were not in any impression till this, being an astrologo-physical discourse of the vulgar herbs of this nation, containing a complete method of physick, whereby a man may preserve his body in health, or cure himself, being sick, for those in charge, with such things only as grow in England, they being most fit for special bodies.

"Herein is also shewed these seven things, viz.: 1. The way of making plaisters, oyntments, oyls, pultisies, syrups, decoctions, juleps or waters, of all sorts of physical herbs, that you may have them ready for your use at all times of the year. 2. What planet governeth every herb or tree (used in physick) that groweth in England. 3. The time of gathering all herbs, both vulgarly and astrologically. 4. The way of drying and keeping the herbs all the year. 5. The way of keeping their juices ready for use at all times. 6. The way of making and keeping all kinds of useful compounds made of herbs. 7. The way of mixing medicines according to the cause and mixture of the disease and part of the body affected. By Nich. Culpepper, Gent. Student in Physick and Astrology. London: Printed for A. and F. Churchill at Black Swan in Pater-Noster-Row, 1703.

"I will give you a short history of some of the plants as given in this book. We will take 'arrach, wild and stinking; called also vulvarian, from that part of the body upon which its operation is most. This hath small and almost round leaves. It perishes yearly, rising again with its own sowing. It smells like rotten fish, or something worse.

"Stinking arrach is used as a remedy to help women pained,

and almost strangled with the mother, by smelling to it, but inwardly taken, there is no better remedy under the moon for that disease. I would be large in commendation of this herb, were I but eloquent. It is an herb under the dominion of Venus, and under the sign of Scorpio. It is common, almost upon every dunghill. The works of God are given freely to man. His medicines are cheap, and easie to be found; 'tis the medicines of the college of physicians that are so dear and scarce to find.

"I commend it for an universal medicine for the womb, and such a medicine as will easily, safely and speedily cure any disease thereof, as the fits of the mother, dislocation or falling out thereof; and let me tell you this, and I will tell you the truth, heat of the womb is one of the greatest causes of hard labour in child birth. It makes barren women fruitful, it cleanseth the womb if it be foul, and strengthens it exceedingly; it provokes the terms if they be stopped, and stops them if they flow immoderately; you can desire no good to your womb, but this herb will effect it; therefore if you love children, if you love health, if you love ease, keep a syrup always by you, made of the juice of this herb and sugar (or honey if it be to cleanse the womb).

"Let such as be rich keep it for their poor neighbour, and bestow it as freely as I bestow my studies upon them, or else let them look to answer it another day, when the Lord shall come to make inquisition of blood."

I have given enough quotations from this book, I think, to satisfy your curiosity. The question to be answered is this: We have seen something of their method of treating disease in the eighteenth century, and can we truthfully say that the nineteenth century, with its bleed, puke and purge practice was as good. We may ridicule their methods, but ridicule is no argument. Now the fad is operate, operate, operate, every pain in the abdominal region, particularly if it be on the right side, appendicitis. "Oh, no, we don't want the bowels to move; we are giving her morphine to prevent their moving." The patient is carted off to the hospital to be operated on, while the family, who can ill afford the expense, is subjected to privations in order to meet the payments, not to mention the intense anxiety of mind, coupled with sleepless nights. That is a little thing, and don't count. What can the poor doctor do?

Then, if a woman has a pain on either side of the abdomen, she must be unsexed; are not her ovaries diseased? Doctors

must live. I cannot understand why the testicles of men do not more frequently require removal. I am sure what is right for unfortunate women should be equally good practice for the men. I am of the opinion that if these doctors or surgeons were compelled by law to take their own medicine when a patient died under the knife, or collapsed after the sixth day, we should have our loved ones spared to us, at least until they died a natural death.

I have seen so much of the blundering, that amounts to little more than a sacrifice to the love of Mammon, that I fear we are retrograding in the treatment of disease. We do not consider the condition of the patients or how we can best relieve their pains.

A physician told me once, "My study is how long I can keep them as *patients* before they lose *patience* with me. All men are entitled to a living, by square dealing, if possible; but if it is absolutely necessary to practice a little wire pulling, it does no harm to any one, and it enables me to live." I told him that I considered it swindling. He was quite offended, and acted as though I had insulted him. It is about time that we as physicians should frown upon such medical mountebanks as these. Every school of medicine is cursed by them; no one can tell just where to find them.

I was quite amused in looking over *Polk's Medical Directory* to see the name of a physician quoted as "regular." Regular what? In the city medical directory the same physician was quoted as "Eclectic." Eclectic what? A sort of Kilkenny echo; don't you think so? Now I think true Eclectics should come together, stick together as one man, one woman, for one cause—Eclecticism! You never saw a garden in your life that did not require weeding, a pulling up and throwing out of unprofitable growth. We all know that weeds will choke the growth of grain, and if not cast away in time, the weeds will be the only harvest the reapers will find. Let us cast out the weeds; let any one that is desirous of gathering that harvest do so; let us pursue the even tenor of our way, dealing fairly with all, dishonorably with none; seeking to perfect ourselves in the method of curing disease, not causing it, as the vaccinators are doing. Let us, I implore you, set our faces steadily, forcibly, persistently against this unconstitutional slaughter of the innocents. Any compulsory surgical operation is not in accordance with the constitution of the United States of America, and it is quite time that the

Eclectic School of Medicine, as a school, should announce their opposition to vaccination. Now they want to inoculate for tuberculosis. Where will this thing stop? Echo asks where? and there is no answer forthcoming. How long will our patient, long suffering people submit to this inhuman treatment?· I have a patient now whose physician (?) wanted to have examined by the board of health. Her lungs are absolutely sound, as I have proven to her entire satisfaction and that of her husband. Only an effort to inject another poison into the body of an unsuspecting, trusting patient. Shall we not, as a school, set our faces against this perversion of good practice, good citizenship, good fellowship? Let us show our colors, fling our flag to the breeze as anti-vaccinationists. We shall regain our prestige. Better far that we should adopt the treatment for the cure of disease as practiced with honor in 1703 than do ourselves and our people the cruel wrong of injecting into the veins of our citizens and their children a poison that does not prevent smallpox, but does inoculate with other diseases, compared with which smallpox is a desirable luxury. I have no wish to weary you, but I do most earnestly want Eclectics and Eclecticism to come to the front and take the place to which they are entitled, with no hobnobbing with any other school. Let us be and remain ourselves.

GEORGE COVERT, M. D.

J. V. STEVENS, M. D., JEFFERSON, WIS.

As I reflect upon the life of him whose "obituary" I have been requested to write, and whose friendship I prized so highly, I feel that the editor's prescribed limit of "six hundred words" will not nearly contain the expressions of esteem and of veneration for his memory that for his many friends and for myself I should be so glad to write. George Covert, M. D., formerly of Clinton, Wis., was born at Ovid, N. Y., December 7th, 1829, and passed from this earthly existence at his home, January 9th, 1902, after an illness of about eight weeks. Previous to this last illness he had been a man of wonderful physical and mental vigor, which had not shown any indications of waning in spite of his many years. He had been constantly engaged in the arduous duties of his profession where a large share of the work was amongst the farming community, and required the endurance of many

hardships, for nearly half a century. He lived at home on the farm in Seneca County, New York, until seventeen years of age, attending the schools in the vicinity. He afterwards attended the Washington Collegiate Institute at Brooklyn, N. Y., where the foundation of a liberal education was laid. For several years he taught in the schools of his native state. His professional education was gained at Starling Medical College, Columbus, Ohio, and at the Eclectic Medical Institute, Cincinnati, Ohio, graduating from the latter institution. He commenced practice at Oakland, Mich., in 1854, and in 1855 located in Elgin, Ill., but came to Clinton, Wis., in December of the same year, thus having been in continuous active practice in Clinton for forty-seven years. His special adaptability to his chosen calling was proven by the fact that he was recognized years ago as one possessed of one of the best trained, most logical and most practical minds known to his colleagues. This was evidenced to them by his great success in his practice and by the valuable articles that he had contributed to the current medical literature and the papers read at state and national association meetings. This prominence lead to his being selected as a teacher in the College of Physicians and Surgeons at Chicago, where he held the chair of "Chronic Diseases," and later was Professor of Obstetrics in that institution, which granted him a diploma in 1878. He was elected to the chair of "Obstetrics" in Bennett College, Chicago, in 1895 and 1896.

All of these honors came to him entirely unsought, as did the presidency and treasurership of the Wisconsin Eclectic Medical Society, which he had helped to organize in 1879, and the presidency of the National Eclectic Medical Association in 1891. He was rather reserved in his association with any but his intimate friends, and did not know nor care to learn any of the fine political methods so often made use of to secure and retain preferment and prominent positions among their fellows by many self-seeking individuals.

He will be greatly missed by his old associates in these societies and his many friends, but, aside from the irreparable loss to his own family, he will be mourned longest and most sincerely in the community where he ministered so long and so faithfully to the needs of his clients, many of whom, although middle-aged men and women, had never had any other doctor since their advent into this world, at which time he was present. He had become such an absolute necessity in so many homes, had

responded to their every call for so many years, and had seemed so strong and well that none of his friends nor acquaintances had apparently given any more thought to the possibility of his life here on earth terminating at this time than of those many years his junior. Their grief-stricken faces at the funeral attested very plainly to their inconsolable sorrow at his death. Dr. Covert was married, in 1858, to Miss Mary J. Barker, who died in 1875, leaving him three daughters, now Mrs. Effie Shepherd, of Denver, Col.; Mrs. Kittie Creeth, of Hastings, Neb., and Mrs. Georgia Thomas, of Clinton, Wis. Twelve years afterward Miss Jennie Muzzy became his wife, and survives him. He was of Holland Dutch extraction. His grandfather, Abraham A. Covert, a native of New Jersey, was one of the earliest settlers in Seneca County, New York. He lived to be ninety-one years old. The Coverts have become so numerous in that county that they have maintained a "Covert Association" for more than twenty years, which meets in annual reunion. The doctor was greatly interested, had been its president twice—in 1887 and in 1899—and also its historian, and met with them the last time in June, 1901. An ancestor of his erected the first church in Brooklyn, N. Y. He was one of the charter members of the Congregational Church at Clinton, Wis., and his pastor, the Rev. Mr. Moore, conducted the funeral services at the residence, which was very largely attended, in spite of the inclemency of the weather, many coming from a distance, including, besides members of the family and other old friends, Dr. Ellingwood, who delivered the eulogy, and Dr. Thornton, of Chicago, and the writer of this tribute to the memory of my dear old friend.

DAVID WILLIAMS, M. D.

S. M. SHERMAN, M. D., COLUMBUS, OHIO.

Dr. David Williams was born at Alexandria, Ohio, December 17, 1843, and died in Columbus, Ohio, May 23, 1892, aged 58 years, 5 months and 6 days. The doctor had not been well for several months, though to a casual observer he appeared to be in robust health. He had complained to some of his professional friends of an obscure pain in the right hypochondriac region, but did not seem to think it was anything serious, and continued his practice as usual. It, however, became more and more severe, until April 26th, when he was compelled to give up his work and go to bed. He was constantly attended by his wife and daughter, and his son, Dr. F. O. Williams, assisted by numerous medical friends, and though his sufferings were great, he bore them bravely.

On May 17th a consultation of physicians was held, and an exploratory incision suggested to him. He decided to have the incision made, if the understanding that if the case were

operable it should be completed at once, but if it proved malignant nothing could be done. He was taken to Grant Hospital, and the incision made on the 19th. Cancer of the liver was found. He stood the operation well, and rallied, but worn out by long suffering and inability to retain nourishment, he failed rapidly, and passed away peacefuly on the 23d.

The early life of Dr. Williams was spent on the farm till he was 16. From that time on he was determined to have an education, and by teaching a part of the time he obtained means to pay his way at Dennison University, at Granville, at Oberlin, and at Adrian, Mich.

During the civil war he responded to the president's call for one hundred days men, and served that term in Company C, 135th O. V. I. On his return from the war he took up the study of medicine, and after practicing a while graduated at the E. M. Institute in 1870. For the next five years he practiced at Yorkville, Ill. He then returned to his native town, where he did an extensive practice for seventeen years. In 1889 he established himself in Columbus, and at once acquired a very large business. He was an excellent surgeon, and a considerable part of his work was of a surgical character. He was also in demand as consultant, his long experience and clear judgment enabling him to give valuable advice.

Dr. Williams was a large man, both physically and mentally, and with his kind and generous disposition, and genial, hearty manner, he won and retained hosts of friends. Being a man of great energy, he naturally did with his might whatever he undertook. He was a regular attendant of the Eclectic medical societies, took an active part in all their proceedings, and was president of the Ohio Central Society in 1889, of the Ohio State Association in 1888, and of the Nationtal Association in 1899.

When a medical law was proposed, and a convention of all schools of medicine called to formulate one, Dr. Williams was one of the foremost in the work, and rendered such good service that he was chosen as one of the Eclectic members of the first State Board of Medical Registration and Examination which the law provided for. After serving four years he was reappointed for a full term of seven years. On the organization of the board he was chosen treasurer, and remained in that position till his death. His associates on the board esteemed him very highly, and his opinions carried great weight.

Dr. Williams was a member of the Congregational Church,

being, as he said, "liberal in religion as well as in medicine." He was a Mason, being a member of St. Alban's Lodge, and also belonged to Joshua M. Wells Post, No. 451, G. A. R.

In 1867 he was married to Miss Anna Nichols, of Licking County, who died in 1888, leaving two children, Dr. F. O. Williams, who has been associated with his father in practice since 1893, and succeeds to his business, and Mrs. H. B. Hutchinson, of Columbus. In 1890 he was married to Miss Jennie Evans, who remains to mourn the loss of the kindest and noblest of husbands. To the Eclectic school of medicine his death is a great loss, and we shall long remember him.

WILLIAM F. CURRYER, M. D.

C. G. WINTER, M. D., INDIANAPOLIS, IND.

Dr. William F. Curryer, late secretary and Eclectic member of the Indiana State Board of Medical Registration and Examination, died in Indianapolis, July 5th, 1902, of apoplexy. He was in apparent good health until the time of the seizure, having been at the hospital calling upon patients the morning of his death.

Dr. Curryer was born on June 5th, 1845, in Butler County, Ohio. He received the usual training of a country boy, going to the district school, attending church on Sundays, and working on the farm. His mother died when he was three years old. As he grew older he made up his mind to have a more than common school education, and at the age of 20 he left home and went to Bethany, studying with his brother, Dr. J. C. Curryer. He afterwards entered the Cincinnati Literary and Scientific Institution, and graduated in 1867. He returned to

Bethany for a short time, but later in the year began business for himself in Thornton, Ind.

Thrift and diligence, as well as sobriety and determination, were conspicuous in his character. He had the trials and vicissitudes which young physicians are certain to encounter, but overcame all, and soon the skies cleared around him and the future brightened.

In 1874 he graduated at the Eclectic Medical Institute of Cincinnati, and in 1882 he attended the medical department of the University of Illinois. He also graduated in the Chautauqua Literary and Scientific Course. In 1877 he was elected president of the Indiana Eclectic Medical College of Indiana. The following year he was appointed to the chair of Pathology and Practice of Medicine, and held the position till 1888. At that time the demands of his private business had become so urgent he was compelled to resign. He was twice elected vice president of the National Eclectic Medical Association, and in 1891 he was elected President.

In 1893, after having practiced medicine in Thorntown for over a quarter of a century, he removed to Indianapolis, and soon established a large and lucrative business. As a surgeon he was conservative and highly successful, having gained the confidence of a great many physicians because of his good judgment and uniform success.

In 1897, when the Board of Medical Registration and Examination was created in Indiana, Dr. Curryer was appointed the Eclectic representative in the board. He was re-appointed for four years in 1898, and again honored by appointment for another four years in April of this year.

Dr. Curryer was a member of the Methodist Church and of several societies. He was married October 4th, 1870, to Miss Phebe M. Rouse, and she, as well as one daughter and one son, remain to mourn the loss of a kind and loving husband and father.

In the death of Dr. Curryer the Eclectics have lost a man whom all honored and many loved—one with whom it was a pleasure to be associated, because of his kindness, his honesty, and his devotedness to his profession; and because of his character and his work he will long be remembered by Eclectics.

JOHN CALVERT BUTCHER, M. D.

W. E. Bloyer, M. D., Cincinnati, Ohio.

Dr. John Calvert Butcher was born in Flushing, Belmont County, Ohio, April 4th, 1846, and died in Urbana, Ohio, on Thursday, June 19th, 1902, at 8 a. m. He was the son of Dr. J. M. Butcher and of Nancy Butcher, who resided in North Lewisburg, Ohio, from 1848 to 1873, when they removed to Urbana. Dr. J. C. Butcher graduated at the Eclectic Medical Institute in 1871. In 1873 he was married to Victoria Pratt, who, with three sons, Frank and Cleland, of Ensly, Ala., and Dr. Harry, a rising young dentist of Urbana, survives him. The doctor was prominent in Masonry, being past eminent commander of Raper Commandery, and as a Knight of Pythias. His funeral services were under the auspices of his commandery, and was largely attended by members of the fraternity.

Dr. Butcher was one of the most prominent Eclectic physi-

cians in Ohio. As such he had an excellent business, extending over several counties. He was an ex-president of the Ohio State Medical Society, and an ex-vice president of the National Eclectic Medical Association, having served as such through some trying ordeals in 1894-5. He certainly would have been more highly honored by his organization had not failing health kept him from its annual convocations. In medical society work Dr. Butcher was a very forcible speaker, and his opinion upon medical and surgical matters was very highly esteemed. He had been ailing for some time previous to his demise. Two years ago he spent several months upon the Pacific coast, in and about Seattle, hoping that the climate and the rest from the exacting duties of his profesion would cure him. He returned much benefited, but when, in February last, a pyloric involvement of some kind, though perhaps of long standing, became prominent and distressing, the old trouble—diabetes mellitus—became more virulent. For several months he made a gallant fight, but his rugged constitution had been so undermined that about June 1st he was obliged to take to his bed. For some days previous to his death he seemed to be gaining through rectal alimentation, but hope was of short duration, as dread diabetic coma overwhelmed him, the inevitable came, death conquered. Human means, loving hearts and hands, were powerless. A successful career was ended; a loving family was bereft; a respecting community was saddened; a faithful brother's head was bowed; a medical profession and school bows in submission to the divine will.

PART III.

TRANSACTIONS

OF THE

NATIONAL ECLECTIC MEDICAL ASSOCIATION

THIRTY-SECOND ANNUAL MEETING.

MILWAUKEE, WISCONSIN, JUNE 17, 1902.

The National Eclectic Medical Association of the United States of America convened, pursuant to adjournment, in its thirty-second annual session in the Banquet Hall of the Pfister Hotel in Milwaukee, Wisconsin, at 10:30 o'clock Tuesday morning, June 17th, 1902.

The president, George W. Johnson, M. D., of San Antonio, Texas, called the session to order and asked the Rev. R. K. Manaton D. D. of the First Methodist Episcopal Church of Milwaukee, to open the session with prayer.

WELCOME.

Dr. Rodecker, of Wonewoc, Wis., president of the Wisconsin State Eclectic Medical Society, welcomed the Association in the following words:

Mr. President, Ladies and Gentlemen of the National Eclectic Medical Association, and Friends:

On behalf of the Eclectics of Wisconsin I desire to express to you words of welcome. I can truly say that it affords me great pleasure to meet this representative body of medical freemen; men who without fear continue to carry aloft the banner

of Medical Eclecticism into every state and territory on this western continent, as our fathers were wont to do. The founders of American Eclecticism labored valorously to establish medical toleration and died leaving to us a priceless heritage. They believed, as well they might, that medical toleration would eventually triumph, and would continue to illume this western continent.

This country of ours—its people—are thoroughly patriotic, and this love of our birthright, individual sovereignty and national freedom, has brought us the honors we are now receiving from abroad for courage, push and tact in all that commends itself to a race of natural born freemen. We believe in everything American, because it is broad, free, deep, sensible and natural. And as Eclectics, we believe in the recuperative powers of nature, and of our national government. *Vires vitales sustinete.* Prof. Broussias in 1828 promulgated these truths.

Much is being said at this present day of Eclecticism, true Eclecticism—the only Eclecticism. I have demonstrated it in my own Encyclopœdic Dictionary as the Eclecticism of facts; in other words, the physiological method. It everywhere seeks facts to subject them to strict examination and to determine what inductions can be drawn from them, and it does not execute this task in an insidious manner; it proceeds without mystery, without prejudice, without concealment, so that all that love the marvelous and that which is illusory will immediately abandon it for this.

We are laboring in the domain of medical research and we are eternally striving to better our medical and scientific knowledge. We have made remarkable strides toward medical free thought, and our discoveries in remedial measures and our phenomenal success with the Eclectic system in medicine has aroused the lion that has slumbered so long.

The force of circumstances has compelled the general profession to recognize us, so much so that they are not only stealing our thunder, but are trying to smuggle the honors of the rights of discovery in Eclectic practice and Eclectic remedies. They have gone so far that they have thrown the doors of the Wisconsin and many other state societies open to Eclectics, provided they drop the name Eclectic. The secretary of the Wisconsin Allopathic Society invited me to membership if I would drop the word Eclectic. I laughed at him for it. He remarked that several who had formerly been Eclectics were members of their

society, even the son of an honored Wisconsin National president. Why is all this? I can only say those weak-kneed Eclectics who have truckled all their lives to Allopathy, and either physically and mentally weak or too lazy to keep up with the profession, have straggled behind and have fallen into the laps of their natural associates.

As the Eclectics of to-day we stand not upon the order of our coming and going. We break through all constraining barriers of medical ethics. We know no ethics but the golden rule. We are chivalrous in all medical learning. We trust no system that will not bear investigation. In fact, we trust none but God. We are for filtering all systems of medicine through the seive of medical common sense and trying them in the crucible of scientific investigation. We believe, with Spencer, that "what is, is right." But we further believe in Child's Qualifications of Spencer, "that is in accordance to the circumstances that surround it, is right." We further believe that truth is eternal and everlasting, whether it be civil, military or medical. Hence we choose the physeo-physiological man, and we choose for a foundation stone the motto, *"Vires vitales sustinete."*

To recuperate the vital powers of our bodies is, as we believe, in accordance to the laws of our being and of nature's God. Let us try to perpetuate that body, that soul. Let us lend our assistance to help the vital economy. Let us prolong life, if we can, by the very best means attainable—by combatting disease conditions, by assisting our bodies to resist and throw off disease. That is our idea of Eclecticism. That is the mainspring of our medical existence to-day, the very best inspiration of all true physicians.

I would not have you believe that disease is an entity; that it is like a rat in the cellar or garret, and that you must get after him with shovel and tongs and drive him out and destroy him. Our system is directly opposed to such a theory. We believe that disease is deranged function primarily, and that we must of necessity follow the indications of *vis medicatrix natura* to be able to assist a cure.. We recognize that the vital forces, so to speak, the recuperative powers of nature, has the best of us, and if we keep close to its beckonings we are on safe ground, and the greater our knowledge and comprehension, the more successful is our Eclectic practice.

In selection of remedies from nature's garden, and from all other sources, we propose to build up the grandest system of

medical practice in this world, a twentieth century system, an up-to-date system. We are ever ready to learn, and have no moonshine ideas of medicine, none that you can call such. We strive for a higher ideal in medical practice, you may call it of whatever name you choose. We want to be right, and we are going ahead. Wherever you go, you will find us there, delving and building up. Be it either in the country, village or city, our inspiration is to build up, our watchword is to build up. Is it not a grand life work to be able to say that I have followed, conscientiously followed, the self-sacrificing thought, word and deed? Build up. Build up the nation, the people, the human economy. This is no idle dream, no chimera, but truth eternal, and happiness everlasting. We believe we are rapidly approaching the millenium in medical practice, and we believe that the Eclectic system and the liberal and progressive men of our day are bringing it about, as we stand between the two extremes of Allopathy and Homœopathy. We bid the warring elements to cease. We willingly hold out the olive branch of peace, and at the same time commend a union of differences and amalgamation of forces for a forward movement, tending towards a liberal, free and universal medicine, and may you older ones live to see that day. Then you can say, with the apostles of old: "Now, Lord, I have run my race and finished my course and am ready to enter into the fullness of my reward."

I will now conclude by extending to you all a hearty welcome to the Badger State, and to our homes if you will, and a generous hospitality awaits you there. We can but wish that your stay in our state and chief city may be pleasant to you, and that your deliberations in convention may result in untold good to the people and general satisfaction to yourselves. I personally thank you for your kind attention.

DR. M'CANN'S RESPONSE.

The president then called upon Dr. J. D. McCann, of Monticello, Ind., who responded to Dr. Rodecker's welcome as follows:

It has not been long since this Association met in Omaha; later we visited Atlantic City, in the East, and last year we were in Chattanooga, in the South. It is fitting now that we come to the North, that we may visit the different parts of this great Eclectic world of ours. We have come from Texas—and I don't

know whether they have any left down there to take care of the business while they are here, for so many came that they occupy one whole side of the dining-room. We are glad they are here. We have come from the West and from the East and some from further north than this, and we are here to act good. I believe wherever this association goes it is a stimulation to those in the immediate neighborhood to do better. We cannot get together in a meeting like this but that we go away feeling brighter and better equipped to go back and do our work again. I believe it is a mistake to tie ourselves down year after year to hard work and not go out and mingle with other men. There are men here who have never attended the association before, and I feel sure they will be willing to come back another year. We are missing the faces of a good many who have been among us in the good work in years gone by. They are dropping by the wayside. But the younger men are being equipped by reason of the better teaching and more thorough work they are doing, and we are ready to take the places, in a manner, of the men who have gone before us. We are here to do good, and I trust our stay among you will be such that you will not regret our having come.

Recently at our Indiana state meeting, at Fort Wayne, several of the Allopathic brethren came up and took part in our work, and one said he thought a thousand times better of the Eclectics than ever before. He found out that we knew something about medicine that they did not, and he was there, I believe, with an honest purpose. I, for one, am willing that these men should learn from us and get some good of which they never have known before.

I thank the Wisconsin Society for the courtesy of welcome they have extended.

ROLL CALL OF OFFICERS.

The secretary announced the legal number of members necessary for the transaction of business to be present. The president asked for the roll of officers, which being called by the secretary, was responded to by the following:

President George W. Johnson, M. D.; First Vice President J. Paul Harvill, M. D.; Recording Secretary Finley Ellingwood, M. D.; Treasurer W. T. Gemmill, M. D.; Corresponding Secretary N. A. Graves, M. D.

Absent: Second Vice President H. H. Brockman, M. D., and Third Vice President L. Bailey, M. D.

Upon motion of W. E. Kinnett the reading of the minutes of the previous meeting was dispensed with, as they were published in usual form.

The president called for a report of the committee of arrangements and reception, which was presented as follows:

REPORT OF THE COMMITTEE OF ARRANGEMENTS.

Mr. President: We, your committee on arrangements, beg leave to report as follows:

Reduced rates have been arranged for, as usual, on railroads and at hotels.

Receipts for tickets purchased in coming to Milwaukee should be handed to Dr. N. A. Graves immediately. If there are any complaints necessary as to rates or accommodations at hotels, please notify some member of the committee at once. Make all arrangements as to rates, etc., as soon as possible after your arrival, so that any differences may be adjusted promptly.

This evening at 8 p. m. an informal reception and entertainment will be held in the parlors of this hotel. Programmes will be distributed.

To-morrow at 4 p. m., or at some other time if the weather proves unsuitable, an excursion has been arranged for, which includes a stop at our celebrated resort of Whitefish Bay, where supper will be served. More complete details of this trip will be announced to-morrow.

This committee is anxious to render any service possible to our guests, and will esteem it an honor to do so if you will only acquaint us with your wants. Please consider us an information bureau and general utility committee during your stay in Milwaukee, which we are very desirous of helping to make pleasant for you.

F. P. KLAHR, M. D., *Chairman.*
J. V. STEVENS, M. D., *Secretary.*
W. H. HURLBUT, M. D.
H. B. LAFLIN, M. D.
J. H. ALEXANDER, M. D.
P. G. HANKWITZ, M. D.
E. J. FARNUM, M. D.
N. A. GRAVES, M. D.

COMMITTEE ON CREDENTIALS.

The president appointed W. E. Bloyer, B. K. Jones, and John Dill Robertson as the committee on credentials. He said:

For the information of those who wish to make application for membership to this association I will state that the fee is $7.00. The committee will not act on the application until the fee is paid. Annual dues are $5.00. I will now make the following changes in committees.

CHANGES IN COMMITTEES.

The Auditing Committee, as appointed, was Drs. Standlee, Williams, and Curryer. I will appoint Charles M. Cannon, of Minnesota, to take the place of Dr. Williams, deceased, and Dr. C. E. Quigg in place of Dr. Curryer, whom I understand is absent.

On the Committee on Necrology I will appoint Dr. A. L. Clark, of Chicago, in place of Dr. MacLean, of San Francisco.

The Committee on Medical Colleges will meet this afternoon.

REPORT OF THE TREASURER.

The treasurer, W. T. Gemmill, M. D., presented his annual report as follows, showing the largest balance in the treasury reported for many years. The report was accepted with applause.

Receipts:

Annual dues	$1,005.00
Initiation fees	266.00
Assessments, pro rata of states (Pennsylvania and Iowa)	6.20
Balance on hand from last report	734.03
Total cash	$2,011.23
Disbursements	1,039.56
Balance	$ 971.67

W. T. GEMMILL,
Treasurer N. E. M. A.

Disbursements:

Order No. 84. Expense account, Dr. Gemmill, June 1st, 1900, to June 1st, 1901	$ 20.42
Order No. 85. The Co-operative Press, printing bills	16.75
Order No. 86. Expense account, Pitts Edwin Howes	23.11
Order No. 87. Expense account, N. A. Graves, Corresponding Secretary	11.00
Order No. 88. Rent of Auditorium, Chattanooga	25.00
Order No. 89. The Whitehead-Hoag Co., badges	28.00
Order No. 90. Typewriter for Committee on By-Laws.	3.75
Order No. 91. Expense account, Pitts Edwin Howes	80.83
Order No. 92. For services rendered, Pitts Edwin Howes	100.00
Order No. 93. Expense account, W. T. Gemmill, to and from Chattanooga	53.20
Order No. 1. Daniels & Co., Chicago, printing stationery	13.15
Order No. 2. Finley Ellingwood, current expenses to September, 1901	10.20
Order No. 3. Shipping expense of Transactions, October 9th to 16th, 1901	55.00
Order No. 4. Rogers & Hall Co., printing transactions.	471.20
Order No. 5. Finley Ellingwood, postage and stenographer	30.00
Order No. 6. The Federal Lith. Co., 200 certificates of membership	30.00
Order No. 7. Circulars to and for state secretaries, Daniels Co., printers	13.95
Order No. 8. Finley Ellingwood, expense account	33.00
Order No. 9. W. T. Gemmill, postage and exchange on checks	21.00
Total	$1,039.56

COMMITTEE ON BADGES.

The committee on badges reported that they had procured 200 badges, according to instructions, which were being distributed. The bill would be handed to the auditing committee.

SECTION WORK.

The president announced that as there was no further business demanding immediate attention, the association would hear and discuss papers. He called the

SECTION OF MATERIA MEDICA AND THERAPEUTICS.

Chairman, W. E. KINNETT, M. D., Yorkville, Ill.; Vice Chairman, V. A. BAKER, M. D., Adrian, Mich.; Secretary, J. D. MCCANN, M. D., Monticello, Ind.

It was moved by Dr. McCann, and carried after some discussion, that the papers presented from those not present should be read by title and turned over with the other papers to the secretary for publication.

Dr. J. M. WELLS, of Vanceburg, Ky., read a paper on *Baptisia and Quinine.* He made an apology for the paper, but hoped there would be found in it something that would induce to more effectual work.

At its close the Chairman announced the paper open for discussion.

Dr. ELLINGWOOD asked the privilege of the floor for a moment, and made an earnest plea that all papers presented be freely discussed. He asserted that the discussions presented the practical features of each paper and the experiences of others, and would add materially to the benefit derived from the papers.

Dr. WELL'S paper was discussed by Dr. BORLAND, Dr. VICK, Dr. MOREY, Dr. GEMMILL and Dr. KRAUSI, of New York.

(The discussion of each paper is published with the paper in its proper section, in the body of this book.—Ed. Transactions.)

Dr. CHARLES M. CANNON, of St. Paul, read a paper on *Some Remedies Not Advertised by Eclectic Manufacturers.*

The paper was discussed by Dr. NORRIS, Dr. GEMMILL, Dr. WILEY of Des Moines, Dr. KRAUSI, Dr. STANDLEE, Dr. RUSSELL of Massachusetts, Dr. W. B. CHURCH, Dr. BOSKOWITZ and Dr. H. K. WHITFORD. Dr. CANNON closed the discussion.

A paper by Dr. V. A. BAKER, of Adrian, Mich., was presented by title—*A Brief Review of Older and Somewhat Neglected Remedies.*

The Committee on Arrangements reported the Milwaukee Gallery of Art would be opened and free to the members of the Association during its session.

Recess was then taken until 2 o'clock p. m.

FIRST DAY—AFTERNOON SESSION.

The President called the session to order promptly at 2 o'clock. He appointed the following

COMMITTEE ON MEDICAL COLLEGES.

Drs. E. LEE STANDLEE, St. Louis; E. J. FARNUM, Chicago; JOHN K. SCUDDER, Cincinnati; GROTENBURG, New York; M. B. KETCHUM, Lincoln, Neb.; and J. G. SEXTON, Atlanta, Ga.

COMMITTEE ON PRIZE ESSAYS.

Dr. STANDLEE was appointed to fill the place of Dr. HAMILTON, of San Francisco, who was absent.

On motion it was decided that the time occupied by the Section of Materia Medica and Therapeutics should be limited to one and one-half hours longer.

RESUMPTION OF SECTION WORK.

Dr. LYMAN WATKINS, of Ohio, read a paper on *Apocynum Cannabinum.*

Dr. N. A. GRAVES followed with a paper on *Heart Remedies and Their Indications.*

Neither of these papers were discussed.

Dr. B. W. MERCER'S paper on *Specific Gelsemium* was read.

It was discussed by Dr. BORLAND, Dr. OLIN of Sioux City, Dr. N. A. GRAVES, Dr. ELLINGWOOD, Dr. GARTH, Dr. CHURCH, Dr. KETCHUM, Dr. WELLS, Dr. POLLOCK of Chicago, and Dr. SHARP of Buckland, Ohio.

Dr. ELOISE G. FOLTZ, of Perry, Iowa, read a paper on *Berberis Aquifolium*, which was discussed by Dr. W. T. GEMMILL,

Dr. C. E. COLE, of Prairie du Chien, read a paper on *Echinacea Angustifolia.*

It was discussed by Drs. SHARP, WELLS, WATKINS, AYLESWORTH, BORLAND, ROBERTSON of Atlanta, and ELLINGWOOD.

Dr. N. A. HERRING'S paper on *Muriate of Ammonium* was then read.

It was discussed by Drs. KETCHUM, WINTERMUTE, BORLAND, and STOUFFER.

Dr. W. H. RUSSELL'S paper entitled *The Value of a Good Preparation;* Dr. A. F. STEPHEN'S on *The Chlorides in Medicine,* and Dr. C. P. REID'S paper on *Hypodermoclysis* were not discussed.

The President then declared the section closed and called the next section.

SECTION OF THE PRACTICE OF MEDICINE.

Chairman, PITTS EDWIN HOWE, M. D.; Vice Chairman, B. L. SIMMONS, M. D.; Secretary, M. H. LOGAN, M. D. All the officers were absent. The President appointed Dr. RUSSELL, of Ipswich, Mass., chairman, and Dr. M. E. DANIELS, of Honey Grove, Texas, secretary.

Dr. M. B. KETCHUM, Chairman of the Section on Eye and Ear, obtained the floor, and stated that his section would not be likely to be called until so late in the National session that interest would flag. He would like, therefore, as there was but few papers presented in his section, that his section be recognized in connection with the Section on Practice. This was granted.

Dr. ELOISE M. FOLTZ read a paper on *Scarlet Fever.*

It was discussed by Drs. HERRING, BORLAND, CHURCH, SHARP, STANDLEE, ROBERTSON and STOUFFER.

Dr. N. A. GRAVES read a paper on *Diagnosis and Treatment of Diphtheria.*

It was discussed by Dr. STEPHENS of St. Louis, Dr. ROBERTSON, Dr. A. L. CLARK, Dr. ROBERTS, Dr. BORLAND, and Dr. WELLS. The section then closed.

AFFILIATION OF NEW SOCIETIES.

The President then said: "We have here Dr. E. G. Sharp, of Oklahoma, and Dr. H. S. Graves, of South Dakota. I would like these gentlemen to state the position of Eclecticism in their states and make a report."

Dr. SHARP: Our friends, the Eclectics of Oklahoma, met May 6th and proceeded to organize a society known as the Oklahoma Medical Association. We adopted a constitution and by-laws and selected the usual committees, and proceeded at once to file articles of incorporation. We desire to be recognized as auxiliary to the National Association.

Moved that this society be affiliated. Seconded and carried.

Dr. GRAVES: The Eclectics of South Dakota met in May and organized a state society. President, W. E. Daniels, of Madison; Secretary, Dr. Stein. We would like to be recognized by this Association.

Moved that they be recognized, seconded and carried.

J. M. WELLS, Vanceburg, Ky.: The Eclectics of the State of Kentucky met at Louisville and reorganized the Kentucky State Eclectic Medical Association. We had a good meeting and elected Dr. Fuller president, Dr. Wood secretary, and Dr. Rudd treasurer. We desire to affiliate and fraternize with the National.

Moved that they be taken into membership. Seconded and carried.

Dr. ELLINGWOOD: The State of Florida has organized, but have made no formal request for membership. The State of West Virginia has reorganized and is in good working shape, but have made no formal request. I make this statement that you may know there have been five new societies organized since last year.

A member: The West Virginia Association elected delegates for this meeting and their credentials were properly made out at that meeting.

Dr. ELLINGWOOD: The Colorado State Society is reorganizing to-day in Denver.

The session then adjourned until 9 o'clock to-morrow morning.

FIRST DAY—EVENING SESSION.

An informal reception was held Tuesday evening in the parlors of the Pfister Hotel. Nearly 300 physicians and their wives and friends were present. Dr. J. V. Stevens of the Wisconsin State Society opened the meeting, and stated that the mayor was to have been present to deliver the formal address of welcome. His absence was not explained. Dr. M. B. Ketchum, who was to have responded to the mayor, made a very appropriate but short address. This was followed by an address by Mrs. E. Lee Standlee, of St. Louis, President of the Ladies' Auxiliary of the National Association. Music was interspersed by the Puritan Male Quartette of Milwaukee. Miss Stetson, of Wisconsin, read a selection and, by special request, Mrs. George W. Johnson, of San Antonio, Texas, also read a selection. The section adjourned to the dining-room, where an excellent collation was served.

DR. KETCHUM'S REMARKS.

It was not my purpose nor function to make a long speech in response to the words of greeting of the mayor, but I would like to say a few words as to who we are.

There are three schools of medicine, the Allopathic, Eclectic and Homœopathic. Nearly one hundred years ago a number of American-born and American-educated physicians of the Allopathic school could not and would not tolerate the destructive influence of the then established practice of medicine, the main essential features of which were the excessive use of the lancet, of calomel and opium. They knew there must be something better offered in nature as remedies for the afflicted, so they tore loose, as the saying is, from the old methods, searched our mountains, woodlands and valleys for the plant life that would yield up its virtues for the benefit of the sick, and after extended

research and study developed a superior and more successful system of practice. Their success led to organization under the broad term Eclectic, and it is this same class of liberal-minded physicians that are assembled here to-day.

We are pleased with this city, with the kindness and attention shown us here, and we hope in return that our visit here will develop only in good to her citizens and that they will think kindly of us after our leave taking.

Again I thank you.

SECOND DAY — MORNING SESSION.

June 18th, 1902.

The meeting was called to order by the President.

Dr. ROBERTSON read the following proposed amendment to the by-laws and moved that the same be accepted.

"No Eclectic Medical College shall be eligible to recognition by this Association until it shall have held one or more sessions of lectures, and in all other respects complied with the minimum requirements of the National Confederation of Eclectic Colleges."

Motion discussed by Drs. ROBERTSON, GRAVES, SCUDDER, KETCHUM, BORLAND, and DOWNES of Galveston.

THE PRESIDENT: This is a resolution from the Chattanooga meeting of last year, which is an amendment to a standing resolution. It has been moved and seconded that this resolution, which was offered by Dr. Best, of Indianapolis, last year, be adopted. It requires a two-thirds vote.

Dr. BOSKOWITZ: I understand standing resolutions cannot be amended. The constitution and by-laws can be amended. If you do away with a standing resolution you simply adopt something that takes its place and does away with it. That is not an amendment.

THE PRESIDENT: This resolution was to take the place of a standing resolution. In effect it is an amendment to the by-laws.

Upon the original motion for the adoption of the resolution by rising vote there were fifteen in favor and twenty-seven opposed to its adoption. The motion was consequently lost

RESOLUTION IN FAVOR OF DR. WOHLGEMUTH.

Dr. BORLAND presented the following resolution:

Resolved, That Dr. Henry Wohlgemuth, of Springfield, Ill., be placed upon the exempt membership.

Dr. GEMMILL remarked that Dr. Wolgemuth had been one of the most faithful members of this society. He had always taken an active part in the cause of Eclecticism. He is now old and unable to attend, and it is but right that we place him on the exempt list and continue him in good standing in this society.

The motion was carried unanimously.

THE SECRETARY'S ANNUAL REPORT.

The President stated that the annual report of the Secretary, which was not called yesterday, would now be read.

(The report, which was presented in the form of an address, is published among the addresses on page 23 of this volume.—Ed. Transactions.)

The report was received with marked enthusiasm and the speaker was continually interrupted with applause, which was prolonged at the close.

Dr. BOSKOWITZ, of New York, immediately obtained the floor and spoke as follows:

Mr. President: I feel that something more than the simple adoption of this magnificent report of our Secretary should be done. I would suggest that a committee be appointed, of which the Secretary shall be chairman, which shall draw up resolutions concerning the recommendations of the report, which may be adopted by this society, and that the committee report to-morrow morning.

The motion was seconded and carried, and the President appointed Drs. ELLINGWOOD, DOWNS and BOSKOWITZ as members of that committee.

COMMITTEE ON NECROLOGY.

The President appointed the following committee on Necrology: Drs. JOHN K. SCUDDER, A. L. CLARK, and W. E. BLOYER.

CORRECTION OF THE MINUTES.

It was moved by Dr. KINNETT that the minutes of last year's transactions which read that Dr. Price, of Chicago and Dr. Pond were not in good standing in the Illinois State Society be corrected. These gentlemen were never members of the Illinois State Society, and the statement that they were not in good standing in that society was incorrect and misleading and reflected on them as men. The motion was carried unanimously.

The Section of Surgery was then called.

SECTION OF SURGERY.

Chairman, GEORGE W. BOSKOWITZ, M. D.; Vice Chairman, E. B. PACKER, M. D.; Secretary, W. N. HOLMES, M. D.

Dr. BOSKOWITZ opened the section with a paper on *Skiagraphy in Surgery*. It was not discussed.

Dr. E. LEE STANDLEE read a paper on *Diseases of the Cranial Bones*, and Dr. J. D. ROBERTSON one on *Appendicitis*.

The latter paper was discussed by Dr. CHURCH, Dr. STANDLEE, Dr. A. L. CLARK, Dr. JONES of Ohio, Dr. ROLAND of Iowa, Dr. DELPRAT, Dr. H. S. TUCKER, Dr. HARBERT, Dr. STOUFFER, and Dr. COFFIN. Dr. ROBERTSON closed the discussion.

THE MAYOR'S ADDRESS OF WELCOME.

The address of welcome to the city of Milwaukee was to have been delivered by Mayor Rose at the entertainment on Tuesday evening. Because of a misunderstanding of his notification he was not present. Coming into the session at this moment, the section work was temporarily suspended. The mayor was introduced and, after making an apology for his

absence on the previous evening, he delivered an informal address, to which the President in a few appropriate words responded.

RESUMPTION OF SECTION WORK.

The section work was then resumed.

Dr. CHURCH, of Michigan, read a paper on *The Pitfalls of Surgery,"* which was not discussed.

The session then took a recess until 8 o'clock in the evening.

EVENING SESSION, JUNE 18th.

The Section of Surgery resumed work at 8 o'clock p. m., with Dr. BOSKOWITZ in the chair.

Dr. E. J. FARNUM read a paper on *Injuries to the Stomach.* Dr. WILEY, of Iowa, asked a question, which was answered by the essayist.

By special permission Dr. FARNUM presented the history of a case of *Esophigeal Abscess, With Treatment.*

This was discussed by Dr. MCCANN, Dr. J. D. ROBERTSON, Dr. DELPRAT, Dr. STANDLEE, Dr. RICE of Texas, and Dr. WELLS.

The section then closed and reported, and the Section of Ear, Eye, Nose and Throat was called.

SECTION OF EAR, EYE, NOSE AND THROAT.

Chairman, M. B. KETCHUM, M. D.; Vice Chairman, ZELL L. BALDWIN, M. D.; Secretary, M. E. DANIEL, M. D.

Dr. DANIEL read the first paper. It was entitled *Calendula in Ear and Eye Diseases.*

It was discussed by Dr. HARBERT, Dr. JOHNSON, Dr. TROWBRIDGE, *and* Dr. KETCHUM.

Dr. TROWBRIDGE presented a paper on *Deformities of the Septum Nasi,'* which was discussed by Dr. H. E. WHITFORD, Dr. JOHNSON, Dr. HARBERT, Dr. TUCKER, Dr. A. L. CLARK, and Dr. KETCHUM.

Dr. J. P. HARBERT read a paper on *Constitutional Treatment in Diseases of the Eye,* which was discussed by Dr. MCCANN, Dr. ROLLIN, and Dr. BORLAND. The discussion was closed by Dr. HARBERT.

Dr. M. B. KETCHUM read a paper entitled *Ametropia as a Factor in Causing Diseases of the Eye.*

The paper was discussed by Dr. ROLLINS.

The section closed and reported.

SECRETARIES' MEETING.

The Recording Secretary of the National Association, believing that the secretaries of the state associations were in a position to impart the utmost information concerning the status of Eclecticism in the states, and also to assist in perfecting a general organization of Eclecticism, called a meeting of the State Secretaries, to be held on the second evening of the session of the National.

The meeting was called to order at 8:15, in the club room of the Pfister Hotel at Milwaukee on Wednesday evening, July 18th, by Dr. Finley Ellingwood, National Secretary. He stated the object of the meeting and suggested a temporary organization. Dr. W. E. Kinnett, of Illinois, was elected chairman and Dr. Ellingwood secretary of the temporary organization.

The following states were represented: Kentucky, Tennessee, Arkansas, Texas, Oklahoma, Missouri, Iowa, Nebraska, South Dakota, Minnesota, Wisconsin, Illinois, Michigan, Indiana, Ohio, New York, Massachusetts, and Pennsylvania.

The secretaries spoke as called upon, relating facts concerning Eclecticism in their states and affirming their belief in the necessity of a perfected organization. It was finally decided upon motion of Dr. Boskowitz, that the National Association be asked on the following day to change its by-laws so as to make a permanent Committee on Status and Organization, this committee to have as its chairman the Recording Secretary of the

National Eclectic Medical Association, and its members to be composed of the secretaries of the state society of each state; that this committee shall meet each year, on the second evening of the session, and shall formulate a report which shall be presented to the Association on the following morning for adoption. The object of this organization is to secure the coöperation of all state societies in perfecting the organization of Eclecticism in the United States and otherwise conducing to its interests as a united body.

The work of the evening was formulated in the following resolution, which was unanimously adopted:

Resolved, That the chairman of this meeting, with two others, selected by himself, constitute a committee to formulate an amendment to the constitution which shall be presented tomorrow to the National Association for the unanimous consent to its adoption relating to the formation of a Committee on Status and Organization.

Dr. Kinnett, chairman, appointed Dr. George W. Boskowitz and Dr. N. A. Graves to constitute the committee with himself.

The meeting then adjourned.

MORNING SESSION, JUNE 19th.

The session was opened promptly at 9 o'clock by the President. He immediately called the Section of Obstetrics.

SECTION OF OBSTETRICS.

Chairman, E. H. STEVENSON, M. D.; Vice Chairman, H. H. HELBING, M. D.; Secretary, FLORENCE TIPPETT DUVALL, M. D.

None of the officers being present, the President appointed Dr. N. A. GRAVES as chairman and Dr. J. D. MCCANN as secretary.

The only paper presented for reading was entitled *Placenta Prævia* and was read by Dr. W. V. ROBERTSON, of Atlanta, Ga.

The paper was discussed by Dr. NORRISS, Dr. CLAYBERG, and Dr. SHAFER.

The section then closed and reported.

ACTION ON A PREVIOUS BILL.

Dr. STANDLEE, Chairman of the Auditing Committee, was then recognized, and spoke as follows:

Mr. President: I wish to bring a bill before this society. It is to offset certain monies paid to the previous secretary, Pitts Edwin Howes, and as the Auditing Committee knows nothing about it, we prefer to refer it back to the society. There was $45.00 received by him for the exhibits, etc., at Chattanooga, and to offset this are the following items:

Stamps for Portland meeting (1896).....	$25.40
Telegrams	8.67
Express bills, Portland (1896).....	4.20
Express bills, June, 1901	5.61
Total	$43.78

This leaves a balance of $1.22, for which he encloses his check. There are no vouchers attached, and we know nothing about it. These bills should have been presented a long time ago and not held over to this late day. The Auditing Committee does not feel disposed to take up the matter.

Dr. GEMMILL, Treasurer: It has been the custom each year to settle with the Secretary and take receipts. At Chattanooga I settled with the Secretary, Dr. Howes, and told him I wanted him to present all the bills he had against the society. We elected a new Secretary, and Dr. Howes said he had presented all there was. All there was yet to come was this money from the exhibitors, which he said he would send later. Now, after arriving at Milwaukee, a year later, I find this letter and this statement awaiting me.

After some spirited discussion it was moved by Dr. Graves and carried that the check for $1.22 be returned to Dr. Howes.

SECTION OF GYNECOLOGY.

Chairman, FRANK P. KLAHR, M. D.; Vice Chairman, E. H. ROGERS, M. D.; Secretary, J. W. BURNS, M. D.

The President upon calling this section appointed Dr. BURNS as Chairman and E. G. SHARP as Secretary in the absence of the other officers.

Dr. A. L. CLARK, of Chicago, read a paper on *Fibroid Tumors of the Uterus.* It was discussed by Dr. GEORGE R. SHAFER

Dr. STANDLEE presented a paper entitled *Uterine Myo-Fibroma Complicated with Pregnancy,* which was not discussed.

Dr. FARNUM read a paper on *Tubercular Peritonitis,* which was not discussed.

Dr. HENRY SCHMITZ read a paper on *Floating Kidney.* It was discussed by Drs. STANDLEE and CANNON. Dr. SCHMITZ closed the section and reported.

DEATH OF DR. J. C. BUTCHER.

The President spoke feelingly of the news just received of the death of Dr. J. C. Butcher, a well-known and highly esteemed member of this Association, which had just occurred at his home, in Urbana, Ohio. He appointed Drs. B. K. Jones and W. T. Gemmill to transmit a telegram of condolence to the bereaved family.

REPORT OF THE COMMITTEE ON PRIZE ESSAY.

Dr. E. Lee Standlee of the Committee on Prize Essay made the following statement:

Mr. President: We find ourselves, as a committee, in an embarrassing position on several points. A former President, believing that it would be an incentive to bring forth the best efforts of the society, appointed a committee to receive essays and award a prize of $100.00 for the best one presented. There were only two papers presented last year, one by a prospective member. They could not make an award, and they recommended to lay them over until this year. Now we have four papers, all very good. Two are very excellent papers, and the other two are good. This committee is not in a position to make an award unless the society chooses to make it. We have, however, graded these papers as 1, 2, 3, and 4, in regular order, and we have a recommendation, which Dr. Downes will present to this society.

Dr. Downes: It is the sense of this committee that Dr. W. S. Turner, of Ohio, is entitled to the reward offered by this Association for the prize essay. (Signed by Committee.)

The report of the Prize Committee was adopted, and a vote of thanks was extended to the contestants.

As there was no money available for this purpose, it was made up by subscription of members present. Dr. Turner subscribed $50.00, and gave a receipt in full to the Association and to those who had contributed to the fund.

REPORT OF THE COMMITTEE ON CREDENTIALS.

The Committee on Credentials reported as follows:

Your committee begs leave to report that we have examined the credentials of all those applicants whose names are appended hereto, and that the names have been posted in accordance with the requirements of the by-laws of this Association. We are satisfied that the applicants are proper parties to become members of this Association, and recommend that they be so elected. The following are the names:

F. B. Crowell, M. D., Lawrence, Mich.
Wm. B. Church, M. D., Holland, Mich.
John C. Bostick, M. D., Benton Harbor, Mich.
Joseph E. G. Waddington, M. D., Detroit, Mich.
Henry Schmitz, M. D., Chicago, Ill.
D. W. Carper, M. D., Henning, Ill.
Wm. John Pollock, M. D., Chicago, Iil.
Arthur H. Reading, M. D., Chicago, Ill.
B. A. Griffith, M. D., Swan Creek, Ill.
H. C. R. Norriss, M. D., Winnetka, Ill.
W. G. Hawkey, M. D., Belvidere, Ill.
W. H. Colvin, Irving Park, Ill.
H. Preston Pratt, M. D., Chicago, Ill.
Henry E. Whitford, M. D., Englewood, Chicago, Ill.
R. W. Sharp, M. D., Buckland, Ohio.
Chas. Gregory Smith, M. D., Cincinnati, Ohio.
J. P. Harbert, M. D., Bellefontaine, Ohio.
H. S. Graves, M. D., Hurley, S. D.
Samuel E. Sanderson, M. D., Minneota, Minn.
Mary Beach Morey, M. D., Gonzales, Texas.
J. P. Rice, M. D., Fredericksburg, Texas.

James C. Mitchell, M. D., Louisville, Ky.
Howard V. Blosser, M. D., Chalmers, Ind.
Carl G. Winter, M. D., Indianapolis, Ind.
J. W. Kannel, M. D., Fort Wayne, Ind.
Samuel D. Sluyter, M. D., Chalmers, Ind.
Morse Harrod, M. D., Fort Wayne, Ind.
Frank P. Klahr, M. D., Horicon, Wis.
Paul G. Hankwitz, M. D., Milwaukee, Wis.
John W. Burns, M. D., Viola, Wis.
John V. Stevens, M. D., Jefferson, Wis.
Edward S. Hull, M. D., Milton Junction, Wis.
William A. Smith, M. D., St. Louis, Mo.
P. C. Clayberg, M. D., St. Louis, Mo.
Chas. H. Rush, M. D., Falls City, Neb.

Respectfully submitted

JOHN DILL ROBERTSON,
W. E. BLOYER,
M. K. JONES,
Committee.

REPORT OF COMMITTEE ON THE SECRETARY'S REPORT.

Dr. Boskowitz, acting Secretary of the committee, made the following report:

To the Members of the National Association.

Your committee to whom was referred the magnificent report of your Secretary respectfully recommend the following resolutions:

Resolved, That this society appreciates the work of our Secretary, and extends to him its cordial thanks.

Resolved, That we express in no uncertain language our decided protest against any existing plan of affiliation with the dominant school of medicine, believing that the greatest good can be done for humanity by the continuance of our work along our established lines as an independent school.

Resolved, That one hundred and fifty dollars be appropriated for the printing and distributing of fifteen thousand copies of the Secretary's report.

This committee would also recommend to this association the appointment of a proper person to act as an organizer, whose duty it shall be to attend state meetings, organize local and state societies, and to assist committees on legislation in the

various states and territories by furnishing them with statistics and such other information as he can to help in securing and maintaining our individuality as a school of medicine.

Resolved, That a committee of three be appointed, who shall have the power to recommend the expenditure of such sums of money as may be necessary to accomplish a proper performance of these duties, such sums to be given only upon the unanimous recommendation of the committee.

The committee and the organizer to be appointed by the chair, with the approval of the society.

(Signed by the Committee.)

Dr. Bloyer moved that the first recommendation of the committee be adopted. Seconded. Carried.

Moved that the second recommendation be adopted. Seconded. Carried.

Moved that the third section be adopted. Seconded. Carried.

Dr. John K. Scudder moved as an amendment to the fourth recommendation that the amount spent for one year shall not exceed $200.00 The motion was lost.

After discussion it was moved that the fourth and fifth recommendations be held over until another year. This motion was seconded and carried.

CONVENTION OF THE ELECTORAL COLLEGE.

The hour fixed by the constitution and by-laws for the convening of the Electoral College for the election of officers for the following year having arrived, the Secretary called the roll of states and colleges for representation in the Electoral College. The following were appointed as delegates:

STATES.

Georgia.—M. V. Robinson.
Illinois.—W. E. Kinnett, J. B. Davis.
Indiana.—J. S. Coffin, Morse Herrod.
Iowa.—E. H. Ellingsen, Thomas Garth.

Kentucky.—J. M. Wells, J. C. Mitchell.
Michigan.—N. A. Herring, W. L. Marks.
Massachusetts.—W. H. Russell.
Missouri.—A. F. Stephens, P. C. Clayberg.
Minnesota.—Chas. M. Cannon.
Nebraska.—M. B. Ketchum, C. H. Rush.
New York.—W. J. Krausi, F. L. Morhard.
Ohio.—W. S. Turner, J. P. Harbert.
Oklahoma.—E. G. Sharp.
Pennsylvania.—J. R. Borland, P. J. Stouffer.
Tennessee.—Paul Harvill.
South Dakota.—H. S. Graves.
Texas.—M. E. Daniel, L. S. Downes.
Wisconsin.—J. H. Alexander, C. E. Quigg.

COLLEGES.

Eclectic Medical College of the City of New York.—C. W. Brandenberg.

Georgia College of Eclectic Medicine and Surgery.—W. V. Robinson.

American Medical College.—E. L. Standlee.

Bennett College of Eclectic Medicine and Surgery.—E. J. Farnum.

Eclectic Medical Institute.—John K. Scudder.

Lincoln Medical College.—M. B. Ketchum.

The delegates withdrew for the election of officers for the ensuing year.

SECTION OF MEDICAL MISCELLANY.

The President called this section and appointed Dr. R. B. CRAWFORD Chairman in the absence of J. PAUL HARVILL, with the Electoral College. Dr. H. S. TUCKER was appointed Secretary.

Dr. H. C. R. NORRIS read a paper on *Toxines,* which was discussed by Dr. SCHMITZ.

The section then rose and reported.

REPORT OF THE COMMITTEE ON RESOLUTIONS.

This committee made the following report, which was adopted:

The National Eclectic Medical Association desires to return the thanks of the society to the Eclectics of the State of Wisconsin for their magnificent reception and untiring efforts to make the Association a success.

Also to express our appreciation of Rev. R. B. Watrous, representative of the Citizens' Business Men's League, for his unceasing efforts in making our stay in Milwaukee so pleasant.

We also desire to thank the local press for their efforts in obtaining and reporting the details of our sessions.

Also the Hotel Pfister for the use of its beautiful room for Association purposes and many courtesies extended.

R. L. THOMAS,
E. J. FARNHAM,
J. P. HARBERT,
Committee.

SECTION OF SURGICAL MISCELLANY.

The President then called the Section on Surgical Miscellany. Dr. RODECKER, of Wisconsin, was appointed Chairman; Dr. H. S. TUCKER acted as Secretary.

Dr. TUCKER read a paper on Gastro-Enterostomy. The paper was not discussed. The doctor made some remarks concerning it at its close.

REPORT OF THE ELECTORAL COLLEGE.

The College now presented their report, which was unanimously adopted.

Milwaukee, June 19th, 1902.

The Electoral College of the National Eclectic Medical Association met in the Ladies' Parlor of the Hotel Pfister at 11:30 a. m. E. J. Farnum was chosen Chairman and E. Lee Standlee Secretary. The following officers were elected, subject to the approval of this Association, by the adoption of this report:

President—J. D. McCann, M. D., Monticello, Ind.

First Vice President—R. C. Wintermute, M. D., Cincinnati, Ohio.
Second Vice President—J. V. Stevens, M. D., Jefferson, Wis.
Third Vice President—M. B. Ketchum, M. D., Lincoln, Neb.
Recording Secretary—Finley Ellingwood, M. D., Chicago.
Treasurer—W. T. Gemmill, M. D., Forest, Ohio.
Corresponding Secretary—N. A. Graves, M. D., Chicago.
The next place of meeting will be at Indianapolis, Ind.

E. LEE STANDLEE, M. D., *Secretary.*
E. J. FARNUM, M. D., *Chairman.*

REPORT OF THE COMMITTEE FROM THE SECRETARY'S MEETING.

The committee which had been appointed at the meeting of the Secretaries on the previous evening being granted permission, presented the following report:

At a meeting of the secretaries of the several state societies and other representatives of the several societies present at this meeting held in the club room of the Hotel Pfister, Milwaukee, Wis., on June 18th, 1902, at 8 o'clock p. m., the following resolution was unanimously adopted:

Resolved, That the Chairman of this meeting, with two others, appointed by himself, constitute a committee to formulate an amendment to the constitution, to be presented to the meeting of the N. E. M. A., and ask for unanimous consent for its adoption, relating to the formation of a committee on Status and Organization.

The committee so appointed recommend the following:

AMENDMENT.

Resolved, That Article V of the Constitution be amended as follows: That the words "and organization" be added to the name of the committee, making it read "Committee on Status and Organization," and that the following be made a substitute for Article V:

"It shall be the duty of the President to appoint a Committee on 'Status and Organization,' consisting of the Recording Secretary of the N. E. M. A., its Chairman, and the Secretary of each State Eclectic Medical Society, and in states where there is no state society, he shall appoint some member of the National, or other suitable person, who may reside in such state."

It shall be the duty of this committee to meet annually on

the evening of the second day of the session, to report the condition of Eclecticism in their respective states, and to discuss ways and means by which a more perfect organization in the state and National associations may be effected. The report of this committee shall be made to the National on the morning of the third day of the session.

W. E. KINNETT, M. D.
N. A. GRAVES, M. D.
G. W. BOSKOWITZ, M. D.
Committee.

It was moved and seconded that this be adopted, which was done unanimously, as requested.

APPROPRIATION FOR THE SECRETARY.

It was moved that Dr. Ellingwood be allowed $200.00 for services as Secretary of the National Association during the past year. The motion was seconded and carried.

VOTE OF THANKS.

Dr. Ellingwood moved that a vote of thanks be extended to the Mayor of Milwaukee for the excellent address delivered to this body on the second day of the session. The motion was carried.

REPORT OF THE COMMITTEE ON NECROLOGY.

The report of this committee was then presented and adopted. (See report in Department of Necrology.—ED.)

Dr. Ellingwood moved that a vote of thanks be tendered to the exhibitors at this meeting. Seconded and carried.

The session took a recess until 2 p. m.

CLOSING SESSION.

The afternoon session was opened promptly by the President, Dr. Johnson.

SECTION OF SURGICAL MISCELLANY.

The Section on Surgical Miscellany was recalled.

Dr. STANDLEE presented a paper on *Modern Anatomical Methods.* There was no discussion.

Dr. P. J. STOUFFER, of Pittsburg, presented a paper on *Nephritis*. This was not discussed.

The section rose and reported.

NOTICE OF A PROPOSED AMENDMENT TO THE BY-LAWS.

Dr. J. D. ROBERTSON, having obtained the floor, read the following:

Notice is hereby given that the following amendment to Article 7, Section one, Part one, is offered, so when amended it will read as follows:

On affairs of medical colleges a permanent committee of five members, none of whom are in any way connected with a medical college, whose duty it shall be to consider such contingent matters as may arise concerning the status of medical institutions, and to whom shall be referred all complaints and disputes of matters relating to medical colleges without debate.

JOHN DILL ROBERTSON, M. D.,
Chicago, Ill.

TO REPORT ON ANTITOXIN.

Dr. Kinnett obtaining the floor said: "Mr. President, yesterday we had some discussion on the use of antitoxin in diphtheria. I believe that as a school of medicine we should take some definite stand and position on this matter, and I would move that a committee be appointed to investigate this question and report at our next meeting.

The motion was seconded and carried.

The President appointed the committee as follows: Drs. W. E. Kinnett, N. A. Graves, Chas. M. Cannon, Lyman Watkins, and E. L. Standlee.

It was moved by Dr. Bloyer that Dr. Aylesworth's paper, which was submitted for the prize, be returned to him at his request. Carried.

INSTALLATION OF OFFICERS.

Drs. Kinnett and Downs were appointed to introduce the newly-elected officers to the Association and to induct them into their respective offices.

Each officer expressed his thanks to the Association for the honors and expressed an urgent desire to promote the best interests of the Association in the fulfillment of his duties.

The Association by a rising vote expressed its thanks to Dr. Geo. W. Johnson, the outgoing President, for the faithful performance of his duties, as also to the other officers.

Dr. L. S. Downs was temporarily appointed on the Auditing Committee to act at once upon some bills.

This being a consummation of the duties of the session, the Association adjourned to meet in Indianapolis in June, 1903.

GEORGE W. JOHNSON, M. D.,
President.

FINLEY ELLINGWOOD, M. D.,
Recording Secretary.

REPORT OF
THE STATUS OF ECLECTIC MEDICINE.

KANSAS.

The Eclectic practice in Kansas is advancing from day to day and is being appreciated by the people more and more. Eclectics have a good field in this state; there is an abundance of room, a large field and, really, sparsely occupied. There is at the present time no place where Eclectics are crowded by brother Eclectics, and it goes without saying that they are never crowded by the other fellow. The only complaint that we hear in Kansas is not that there are too many Eclectics and that they interfere with each other in their work, but that they are so far separated that in very many cases it is impossible for an Eclectic to obtain the assistance of a brother Eclectic in the time of need. There is little or no bitterness among Eclectics, even where two or more of them are in the same city or community; in fact, it might be well said that Kansas is not a battlefield among practitioners generally. While there are occasional communities where the doctors observe each other with jealous eye, yet these are few and far between, and the participants affiliate with the other fellow.

The legislature of 1901 passed a new medical bill, which requires every physician practicing medicine to hold a certificate from the State Board of Medical Examiners and Registration. This board is composed of seven members, two of whom are Eclectics, two Homœopathics and three Regulars. Five affirmative votes must be registered to obtain a certificate. The law in its passing provided that all persons then residing in the state of Kansas upon the passage of the act might be registered under three conditions: First, those holding diplomas from reputable medical colleges (reputable medical colleges to be determined by the board). Second, all persons who had been in continuous

practice for seven years prior to the passage of the act might register upon proof of such continuous practice being presented to the board within four months after the passage of the act. Third, all persons taking the required examination upon the usual branches, each person being permitted to be examined in materia medica and therapeutics and theory and practice of the school which he practiced.

Up to the present writing there have been registered in Kansas on diplomas from all the schools, including Osteopaths, 2,469 physicians; physicians seven years or more in practice, 276; physicians examined and not included in above list, 68; making a total of 2,813. This is very close to the whole number of physicians that there are in the state at this time. The law has been very generally observed and complied with, with but isolated cases of friction. There seems to be a very general satisfaction as to the requirements of the law and as to the action of the board. While possibly quite a number of physicians have been registered who should not have been, yet upon the whole the beginning has been good, and the result will doubtless be to the advantage of the state. Of the number registered, as near as can be ascertained at this time, 380 are Eclectics; about an equal number are Homœopaths. There are but few physicians in Kansas professing to be Eclectics who are non-graduates, despite the fact that everything nondescript in Kansas has been credited to the Eclectics. The Eclectic members of the board have scrutinized Eclectic applicants very closely and have endeavored to weed out every one that was discreditable. There are, unfortunately, quite a number of persons in Kansas holding diplomas from fake Eclectic colleges. These have been thoroughly weeded out.

It is not surprising that more fake colleges and practitioners should appear among Eclectics proportionately than among other schools of medicine, on the old and tried rule that "the counterfeit proves the genuine."

I am confident that when the classification shall have been made and completed the Eclectic school will have been credited with about 500 practitioners in Kansas.

Of the registered physicians in Kansas, about 15 per cent belong to the Kansas Eclectic Medical Association and are in good standing. About 10 per cent additional have at one time and another been in affiliation with the State Society. The Kansas Medical Association has had a checkered career. It has

been up against some propositions that were very unpleasant. But a few years ago the society was reorganized with eight members, since which time it has been gradually growing in interest and sufficiency, and more interest is being taken in the society each year. The small attendance at our society meetings can be accounted for in several ways. The principal one is, as before stated, the fact that Eclectics are isolated, and having a good practice and having little or no assistance, makes it extremely difficult for them to leave their field even for a few days. That this is true is further evidenced by the fact that they are physicians only, rarely or never engaging in politics or going to national associations or places of amusement even, because their entire time is taken up. On the whole, our men are sleek and fat and are able to draw on a fair-sized bank account, which will make up for some of the disagreeable features.

There is room for Eclectics in Kansas, but they must be well grounded in the faith. Nondescripts and poorly qualified physicians will find a field in Kansas full of stumps and stones and difficult propositions, and had better go to—well, to Texas.

Osage. E. B. PACKER, M. D.

ILLINOIS.

We have reason to believe that, numerically speaking, Illinois is the banner state in the Union for Eclecticism. The last report of the Secretary of the State Health Board gives us 1,152 physicians who are graduates of Eclectic medical colleges. Of this number we find many who have moved from the state, some have died, and some have left the profession. There are yet over one thousand physicians of our school in the state. We have a superintendent of one of the state insane hospitals, and Eclectic member of the board, and officers in other institutions.

We have staff officers in at least seven hospitals in Chicago, and internes in several. Our physicians are not discriminated against to any extent, and their general recognition speaks well for their ability. We have now two colleges, and the last session of our state society was probably the most successful session we have ever held. There was over 150 present and 37 new members were added to the list. Prof. N. A. Graves was President. In his address he suggested that some course be adopted to consoli-

date the Eclectic physicians and unite them into a compact working body. In accordance with his suggestions a change was made in the by-laws and a Secretary of Organization and Consolidation was elected. A bureau was established, and this Secretary was authorized to enter at once into correspondence with every Eclectic in the state, to interest him in the consolidation of Eclectics, and to have him registered as one of the consolidated working body. The expenses of the work are to be assumed by this society, and the Secretary will make a full report at the next session.

Dr. W. E. Kinnett, for seventeen years Recording Secretary of this society, was elected to fill the office of Secretary of the Bureau of Organization, and to the present date he is doing magnificent work, and the probabilities are that in his report he will have some suggestions to make from his one year's experience which will prove of value to other states in securing the coöperation of the entire body of Eclectics in the state.

INDIANA.

In 1864 a few of the loyal Eclectics of Indiana met and formed a society that has been tenacious of life and still lives and bears its annual crop of fruit regardless of circumstances.

We regret the passing away of our veterans and the afflictions of age that keep others at home. We rejoice, however, at the number of young men that have been in training for the past ten years and who are able and willing to bear the labors and responsibilities. Each year there is added a goodly number of willing workers.

At our recent meeting in Fort Wayne, while not so largely attended because of its extremely northern location, we had a meeting that was good to attend. The discussions, we are safe in saying, was the best ever listened to. Several Allopathic friends came in and took part in the discussions. One remarked that he "thought a thousand times more of us Eclectics than he ever had thought before." We are found in eighty-eight counties of the state, four counties only not being blessed with an Eclectic physician.

We hope to have a stenographic report of our next meeting, that we may preserve the discussions of each paper, and then have the whole properly printed.

Indianapolis should have an auxiliary society, and we think from the large number of Eclectics in the gas belt, Marion should have another.

A larger number of Indiana Eclectics should belong to the State and National Associations.

Monticello. J. D. McCANN, M. D.

OHIO.

It is a pleasure to again report to this honorable body that there never has been a period in the history of Eclecticism in Ohio when the principles and methods as advocated by our system of practice have been so popular as at the present time.

Not only is our practice popular with the masses, but there is an apparent effort on the part of other schools to become better acquainted with the methods by which we achieve success.

We now have nearly eight hundred Eclectics in Ohio. Our State Society numbers over two hundred members, and is doing valiant work for the cause of Eclecticism. We had an addition of twenty-three new members at our meeting last year at Put-in-Bay.

We have four auxiliary societies in Ohio in a flourishing condition, viz., the N. W. O. E. M. A., the Central O. E. M. A., the S. W. O. E. M. A., and the Cincinnati E. M. S.

The college at Cincinnati is doing excellent work. The classes are large and the students are of a high order of intelligence.

Our State Society Transactions are published annually, and always contain much information that is of value to the busy practitioner.

Ohio physicians have always been leaders in the cause of Eclecticism, and it is our desire to still merit and hold the proud distinction.

Waynesfield. W. S. TURNER, M. D.

MAINE.

As the status of our State Medical Society virtually represents that of Eclecticism in the "Pine Tree State," I will briefly review its history:

The Maine Eclectic Medical Society was organized June 28, 1865, and incorporated February 29, 1868. The Society reorganized under its charter in the city of Portland, June 24, 1868. By the terms of its charter the Society is granted rights and privileges second to those of no other similar organization in the state.

It has on its roll thirty-six names of resident and non-resident members. During the past few years the Society has made a steady increase in its membership and in the interest in its meetings. While death has claimed some of its members, more than enough have been added to compensate the loss. Up to 1895 the Society had successfully opposed all restrictive medical legislation, and but for its crippled condition at the time, the law of 1895 would never have been enacted.

In the fall of 1895 it was recognized through the efforts of Dr. Theophilus J. Batchelder, since which time it has held annual meetings regularly and several very interesting semi-annual meetings. New members have been added, and the last annual meeting, held in Portland, May 22, was of special interest.

The Eclectics are not represented upon the Board of Medical Registration, but eminent legal council are of the opinion that our charter gives us the right to examine applicants and license them as practitioners if found competent. As the result of this non-representation, practitioners of our school are loath to come to Maine to locate.

The Maine Eclectic Medical Society has always upheld a high standard of professional requirements, as its records clearly prove, resolutions having been passed condemning the crime of abortion as well as against the crime of selling medical degrees.

In its thirty-six years of existence the Maine Eclectic Medical Society has won for itself the respect of every true Eclectic, and outside our school an enviable reputation for itself both at home and abroad.

The first report of the Board of Medical Registration gives the whole number of Eclectic practitioners in the state as sixty eight. We regret to say that not over twenty of these have received the M. D. degree. This is to be attributed in part to the remoteness of Eclectic medical colleges.

Although no Eclectic has registered in our state since the law of 1895 came in force, there are occasionally those who, notwithstanding their "regular" training, are affiliating with our Society and cause.

Biddeford, Me. HENRY RENY, M. D.

CONNECTICUT.

The Connecticut Eclectic Medical Association is still flourishing and slowly but surely gaining strength. The Association consists now of about fifty-four members, with President, Vice President, Secretary, Treasurer, and a Board of Examiners. This board has equal rights with the Allopaths and Homœopaths.

At this session of the legislature a bill was introduced pertaining to the medical boards of Connecticut. This bill called for one examining board, to be appointed by the Governor, and to consist of three Allopaths, two Homœopaths and one Eclectic. Every known means was employed to pass this bill, but we still hold our own, and our rights and privileges are the same.

The Legislative Committee of our Association, Drs. S. B. Munn, of Waterbury; T. S. Hodge, of Torrington; Royal E. S. Hayes, of Hazardville; Henry Bickford, of Hartford, and Leonard Bailey, of Middletown, deserve the gratitude of every true Eclectic for so valiently contesting the passing of this bill.

We hold annual and semi-annual meetings, which are of much interest and benefit to all who are able to attend. There are a number of good Eclectics in our state who are not members of the Association, but we hope to win them steadily until all are enrolled.

Waterbury. GEO. A. FABER, M. D., Secretary.

MASSACHUSETTS.

Eclecticism in Massachusetts represents numerically the same strength as at the time last reported. The Massachusetts Eclectic Medical Society holds meetings annually and semi-annually in Boston. These meetings are fairly well attended, and all prove interesting and instructive.

The Boston District Eclectic Medical Society holds meetings at the same place each month, except June, July and August.

Since the formation of the Board of Registration in Medicine, on which board we have two representatives, Eclecticism has been honored by receiving the chairmanship on said board each successive year.

Our representatives on that board are Dr. C. Edwin Miles, of Boston Highlands, chairman, and Dr. Augustus L. Chase, of Randolph.

Without doubt the formation of this board has proved beneficial to our school and has given its adherents a better standing in the community.

The Eclectic practitioners are doing well in this state, and there are many locations where an Eclectic would speedily secure a lucrative practice.

Any one desiring to come to Massachusetts will be warmly welcomed and assisted in securing a good field in which to practice their profession.

Boston. PITTS EDWIN HOWES, M. D.

NEW YORK.

In the great state of New York we are well organized, a state society which meets annually, as a rule, in the capitol of the state. A live Legislative Committee, which in these days is important, publish annually a volume of transactions, in which special attention is given to our materia medica and therapeutics.

Auxiliary to the state, and paying a per capita tax of one dollar per member to it, are twelve societies scattered through the state, with membership varying from ten to one hundred.

The college in New York is to-day our pride. Its standard is high, and its students in their examinations before the state board have proved themselves the equal of any in the state; in fact, the percentage of failures in our classes is less than others.

The diploma from a medical college in New York does not entitle one to practice; the license to practice is granted by the Regents of the University of the State after examination before one of its boards. There are three boards representing the three state societies—Eclectic, Homœopathic, and Allopathic. The questions before these boards are the same in all departments except materia medica and therapeutics. The college is located at 239 East Fourteenth street. It publishes *The Eclectic Review*—a monthly journal devoted to the principles of our school.

New York. GEORGE W. BOSKOWITZ, M. D.

GEORGIA.

In taking a retrospective view of Eclecticism in Georgia, and comparing for twenty-five years the status of our profession at that time and its present status, we feel that the Eclectic med-

ical profession of our state has much to be proud of. The efforts of a faithful few, by their untiring work, have made possible the high standing of Eclecticism at this time.

Twenty-five years ago there were but a few physicians in Georgia known as Eclectics. To-day you can find one or more in almost any county and city in the state. At that time we had no organization, there was no concert of action. Now we have a splendid state association, with a membership of nearly two hundred members; a medical college that has the respect of the people; a beautiful building, new, modern, fully equipped, with ample ground for enlarging whenever it becomes necessary to meet the yearly increasing number of students.

The last annual meeting of our State Association was the largest, most instructive and profitable ever held. At the close of the meeting the members of the Association and the alumni of Georgia College of Eclectic Medicine and Surgery held a grand banquet at the Hotel Majestic in this city. Many distinguished men and women were present, among them Gov. Allen D. Chandler, who made a notable speech, complimentary of the Eclectic profession of the state, the progress they had made, their good standing at home, and wished them future success of the college, association and hospital. The daily press was also well represented, and all praised the success of Eclectics in Georgia.

During the last meeting of our State Association twenty-five hundred dollars were subscribed towards starting a hospital fund, and more promised when the building was started. We now have a charter for the hospital, and work will be commenced at an early date, and we promise the Eclectics of Georgia and the South a thoroughly equipped hospital, one that will be under the exclusive control of Eclectics.

Our State Association at its last meeting appropriated fifty dollars towards entertaining the National Association at its meeting in Chattanooga, Tenn.

The Eclectics of Georgia hold many places of honor and trust. Dr. W. C. Fisher, ex-President of our State Association, is now county physician of Fulton County, one of the largest populated counties in the state. The position is an important and lucrative one. Dr. R. L. Hope is physician in charge of the Fulton County Alms House, one of the largest institutions of its kind in the South. Dr. Hope is graduate of the Georgia College of Eclectic Medicine and Surgery, and has held the office he now hols for twenty years. Two of the graduates of the Georgia Col-

lege of Eclectic Medicine and Surgery are city ward physicians in this city, viz., Drs. Martin and Lindorm; three of the graduates of the Georgia College of Eclectic Medicine and Surgery represent their counties in the legislature of Georgia, vis., Dr. J. Frank Harris, of Pavo, Ga.; Dr. J. R. Nesbit, of Riverdale, Ga., and Dr. A. B. Duncan, of Leesburg, Ga. Dr. J. Frank Harris is now President of the State Association. Many other physicians of our school hold honorable public positions, but space will not admit of mentioning all. It is enough to show the standing of our profession in Georgia.

It is well known that the Eclectic school of medicine in this state has its own medical board of examiners, appointed by the Governor. Our Allopathic friends made every effort to prevent this, but the legislature of Georgia could not be influenced to create a single board the majority of which were to be of the old school. Here I wish to say that the state of Georgia never legislated against the rights of other schools of medicine and never will.

In conclusion let me say that we will not be any less earnest in our work for the cause of Eclecticism in the future than we have in the past. We are now in a position to do more than ever before, and we confidently predict a steady growth of the principles of Eclecticism in Georgia and the South.

Atlanta. W. M. DURHAM, M. D.

WISCONSIN.

The status of Eclecticism in Wisconsin has been considerably improved in the last few years in the estimation of the general public and the medical profession throughout the state, or possibly it should be said has become better known to them.

The four years of harmonious coöperation of the State Board of Medical Examiners, consisting of three Allopaths, two Homœopaths and two Eclectics, in their earnest endeavors to correct and justly interpret and enforce the provisions of the medical law passed in 1897 has done much to correct many false impressions of each other heretofore entertained by each of the schools respecting the other and aided them in arriving at a different conclusion in regard to the intentions of honest, reputable practitioners, to whatever school of therapeutics they may give their allegiance.

Herein may be found an argument for such medical legislation and for mixed boards.

The fact that neither the Eclectives nor the Homœopaths have asked for and never had any intention of asking for any favors, only "a fair field and no favor," has shown the dominant school that we are as anxious as any one else to raise the standard of medical education and quite willing to submit to any needful and just regulation of the practice of medicine and surgery. Public officials and legislators are thus becoming acquainted with us, and are finding out that we are acquiring some political influence, which has materially added to their respect for us, even if it has not been entirely reciprocal in all cases. We have not been affected by any scandal since the bogus (so-called) Eclectic diploma mill has been driven from the state, chiefly by the efforts of the Eclectics.

The status of our State Society has been considerably affected in recent years by the inevitable decimation of our numbers, in the removal of so many of our faithful old veteran members from the scenes of their earthly labors and the final triumph of the foe whom they had so loyally and successfully opposed during many years of constant watchfulness.

We had ninety-seven members' names on our books, and about one hundred and fifty Eclectics in the state who have not joined our society as yet. Our status in Wisconsin, and I think in other states, too, would have been much better now if more of our graduates had located in larger cities rather than to have chosen to locate, in so many instances, where they would be unopposed and where they have conscientiously and continuously remained, losing the many advantages that would have accrued to themselves and others if they had come out to our state and national meetings. Each one should be a missionary in endeavoring to induce these recluses to come to our aid with their experiences, and at the same time profit with us in the results of our combined efforts.

Jefferson. J. V. STEVENS, M. D.

IOWA.

The condition of Eclecticism in Iowa can be briefly told. This, one of the leading agricultural states of the Union, with a population of two millions plus, has a few over four hundred Eclectics practicing within its domain.

The Iowa State Eclectic Medical Society has been organized for thirty-four years. It has a nominal membership of some seventy-five, with an active membership of less than twenty-five, which number constitutes all there is of organized Eclecticism in Iowa to-day.

So far as observation goes, the Eclectics of Iowa are successful practioners; in proportion to their numbers, they perhaps occupy their share of the various elective and appointive positions. If there is any complaint to be made on this score, they are, in my opinion, themselves to blame for it. Without thorough organization but little is to be accomplished in the way of getting proper recognition, and in my opinion the best method is in a strong, active state organization.

Those who were active in the cause twenty-five years since are, by reason of the approaching infirmities of advancing years, less able to carry on the work, which should be taken up and carried on by the younger members of the profession. It remains for them to decide whether or not Eclecticism in Iowa will stand or fall.

Des Moines. E. D. WILEY, M. D.

PENNSYLVANIA.

The Eclectic Medical Association of Pennsylvania convened here in Harrisburg in the Supreme Court room on the 21st and 22nd inst.

We had 126 members enrolled. Out of this number 14 have died and 67 have become delinquent or moved out of the state and have been dropped from the roll, which leaves us 45 live, efficient members. Six of these were taken in during our last meeting. Any members visiting two consecutive meetings and not paying their dues, or not having satisfactory communication with the Secretary, are dropped from the roll.

We are not retrograding, for our last meeting was the best one we have had for years—live, and instructive, as we had about thirty members present. We had a very pleasant time, and felt we were much benefited by being present. Our society is strong though few in number, and financially we are in good condition.

The officers are as follows: President, Frank Gross, M. D., McChanicsburg, Pa.; First Vice President, Nannie M. Sloan, M.

D., Latrobe, Pa.; Second Vice President, E. F. Bittner, M. D., Somerset, Pa.; Recording Secretary, R. E. Holmes, M. D., Harrisburg, Pa.; Corresponding Secretary, W. O. Keffer, M. D., Frugality, Pa.; Treasurer, J. M. Louther, M. D., Somerset, Pa.

Harrisburg. R. E. HOLMES, M. D.

NEW HAMPSHIRE.

I am able to state that we have a State Society in New Hampshire, but the members are scattered and few in number, and it has been a difficult matter to obtain a quorum at the meetings. A few, who always make an effort to attend the meetings, have become discouraged at the poor attendance, and have suggested disbanding the society. This will probably be discussed at the annual meeting next June.

Walter H. True, M. D., 21 Academy street, Laconia, can tell you definitely about the number of Eclectics in the state, as he has been Secretary of the Society for a number of years.

I do not know that there are other New Hampshire Eclectics besides myself who are members of the societies of other states, with two exceptions. Dr. Gerald formerly lived in Massachusetts, and belongs to that society, and Dr. W. F. Templeton, formerly of this city, but now of Glover, Vt., has for many years been prominent in the Vermont Society. It was due largely, if not wholly, to his efforts that the New Hampshire Society had an existence. When he moved from that state we lost our best member.

I regret that I cannot report a more hopeful condition of the New Hampshire Society, but such are the facts as I know them.

NEW MEXICO.

In the near future I will answer your question in regard to the number of physicians who call themselves Eclectics in the territory of New Mexico. Just at present I am unable to furnish the information, but will make application to the Secretary of the Board and find out just exactly where the different physicians are located and correspond with them. As soon as I have all the information you desire I will give you full details. I am under the impression that the number is not very great, perhaps

twelve to fifteen in the entire territory: yet as far as I know they are all creditable men.

I believe it would be rather difficult to start a Territorial Society here for the reason that we have magnificent distances here, and there are but few railroads to any point that we might decide on to meet, and it would take some of the members three or four days, or even a week, to get there. Still, I believe it would be worth while to investigate the matter.

Albuquerque, N. M. JOHN TASCHER, M. D.

TENNESSEE.

Eclectic physicians in this state have always been rather backward in the matter of organization. Our State Society is twenty-three years old. It grows slowly but surely. Our attendance this year was thirty-one—the best attendance we ever had. This number is 20 per cent of all the Eclectics of the state and about 90 per cent of the paid-up members of the society.

Our physicians, as a rule, practice specific medication. They are successful physicians and substantial citizens.

We meet in Nashville nearly every year, because we have better attendance at some central point and because we get reduced rates during the month of May.

Our date of meeting is the second Tuesday in May, unless otherwise ordered by the Executive Committee. We are to have a revision of our constitution and by-laws at our next meeting.

In order that we may grow stronger each year we solicit Eclectics from strong state societies or colleges to attend our meetings. There are less than ten Eclectics in our State Society who belong to the National. We hope to increase this number in a short time.

Nashville, Tenn. J. PAUL HARVILL, M. D.

UTAH.

After this length of time I will try now and answer your letter to the best of my ability. I must commence by saying that I have been trying to get a list of all the Eclectic physicians in Utah. I find that through medical persecutions and other causes that there are only about six Eclectic physicians left in

this state. The following are the names and addresses: Dr. Olson, Brigham City, Utah; Dr. Bryant Stringham, Bountiful, Davis County, Utah; Dr. R. A. Hasbrouck, Salt Lake City; Dr. J. T. Taylor, 113 South-East street, Salt Lake City; Dr. C. M. Chandler, Salt Lake City; Dr. McCurtain, Salt Lake City. I think that all the above named physicians are in good standing and worthy to be called Eclectics. I believe there is a number of settlements in the state where Eclectics could work up a good practice if they had the staying qualities with them and would fight for their rights. If not, they had better stay away from Utah. I see no present prospects to organize an Eclectic Medical Society in Utah. You must know, doctor, that we had at one time an Eclectic Medical Society here, and we were incorporated, but the medical persecutions that we had to go through simply ruined our society, as it was only the few who would stand by the society, and they had to pay all the expenses of suits, attorneys' fees, court expenses, etc. This broke our society up, and nearly all the Eclectics left the state for more congenial places.

The fight that we had over the medical practice act for a time nearly ruined Dr. Hasbrouck, Dr. A. L. Davison and myself financially, and in fact Dr. Davison was so persecuted that he had to leave the state. Hasbrouck and myself have worked up again a fair practice, but I must say that for myself the persecution has caused me the loss of thousands of dollars, and as I am now getting into years I feel its effects severely. I am now 62 years of age.

I have been thus explicit so that you may know just our situation here. If I can be of any further service to you, please let me know.

MINUTES OF THE TWO SESSIONS OF THE LADIES' AUXILIARY OF THE NATIONAL ECLECTIC MEDICAL ASSOCIATION.

At 2 p. m., June, 20th, 1901, the ladies attending the meeting of the National Eclectic Medical Association, with members of that body, met in the parlors of the Read House, at Chattanooga, Tenn., to discuss the advisability of forming an auxiliary society.

Mrs. Geo. W. Johnson, San Antonio, Texas, stated the proposition and purpose. It was agreed to organized under the name of "The Ladies' Auxiliary to the National Eclectic Medical Association," the object of the organization being to increase the attendance of ladies at these yearly gatherings by inviting them to come and making them welcome.

Mrs. E. Lee Standlee, St. Louis, Mo., was made President; Miss Ethyl H. Richardson, M. D., Quincy, Ill., Secretary, and Mrs. Finley Ellingwood, Evanston, Ill., Treasurer for the ensuing year.

The Secretary was instructed to send invitations to the wives of members of the National Eclectic Medical Association to meet with the Ladies' Auxiliary at their next assembly to be held in Milwaukee, Wis., June 17th, 18th and 19th, 1902.

The ladies present who gave their names as future members were twenty-three in number .

Suitable stationery and pins were to be procured by the Secretary.

Upon motion the meeting was adjourned to the hour following luncheon, June 17th, 1902.

June 17th, 1902.—Ladies' Auxiliary called to order by Mrs. E. Lee Standlee, President. Minutes of last meeting read and accepted, followed by roll call. Constitution and by-laws were read and discussed, such alterations being made as members desired. A trolley party having been announced for 4 p. m., the motion to adjourn till 9 a. m. June 18th was carried.

June 18th.—Quorum ascertained. Constitution and by-laws were adopted as read. New members were enrolled, making a membership of thirty-nine. Adjournment till 9 a. m. June 19th.

June 19th.—Quorum ascertained. Bills of Secretary were presented and ordered paid from membership fees, which were collected from members present. Election and installment of following officers ensued:

President.—Mrs. E. Lee Standlee, St. Louis, Mo.

First Vice President.—Mrs. W. E. Kinnett, Yorkville, Ill.

Second Vice President.—Mrs. Geo. W. Johnson, San Antonio, Texas.

Third Vice President.—Mrs. O. S. Coffin, Carthage, Ind.

Secretary.—Miss Ethyl H. Richardson, M. D., Quincy, Ill.

Treasurer.—Mrs. Finley Ellingwood, Evanston, Ill.

MRS. E. LEE STANDLEE, *President.*
MISS ETHYL RICHARDSON, M. D., *Secretary.*

CONSTITUTION AND BY-LAWS.

ARTICLE I.

This society shall be known as the Ladies' Auxiliary of the National Eclectic Medical Association.

ARTICLE II.

The object of this society is to encourage the attendance of the immediate lady relatives of the members of the National Eclectic Medical Association, to promote acquaintance and friendship among them, and to contribute to the general sociability of the sessions.

ARTICLE III.

Those eligible to membership are the wives, daughters, mothers and sisters of the members of the National Eclectic Medical Association, and the lady physicians who are members of the National.

ARTICLE IV.

The officers shall consist of a President, who is not a member of the National Eclectic Medical Association, a First, Second and Third Vice President, a Secretary, and a Treasurer, who

shall hold office until the close of the session of the National Association of the following year.

The officers shall constitute a reception committee for special occasions where such a committee is required, and the President shall have the power to appoint other ladies from the membership upon this committee and to convene the committee at her pleasure, as required.

ARTICLE V.

The meetings of this Auxiliary shall be held at the call of the President during the sessions of the National, to transact any business of the Auxiliary and to elect officers.

BY-LAWS.

ARTICLE I.

The officers shall be elected at the annual meeting called by the President, at which a quorum of seven members must be present. Voting shall be by ballot, a majority of the votes electing the officers.

ARTICLE II.

The annual dues shall be one dollar, payable in advance.

ARTICLE III.

The order of business shall be such as is usually adopted by parliamentary bodies.

ARTICLE IV.

The payment of the annual dues secures the privileges of membership for one year from the date of payment, and such privileges are suspended at the end of the year until further payment.

ARTICLE V.

This Constitution and By-Laws may be amended by a vote of three-fourths of the members present at any regular meeting.

MEMBERSHIP 1901-1902.

Bloyer, Mrs. W. S., 1021 Dayton street, Cincinnati, Ohio.
Cannon, Mrs. C. N., St. Paul, Minn.
Coffin, Mrs. O. S., Carthage, Ind.
Cooper, Mrs. Du Vall, Granville, Tenn.

Daniels, Mrs. M. E., Honey Grove, Texas.
Davis, Mrs. J. B., Pontiac, Ill.
Dickey, Mrs. J. A., Bristol, Tenn.
Downs, Mrs. L. S., Galveston, Texas.
Duvall, Mrs. F. T., M. D., 293 Courtland avenue, Atlanta, Ga.
Ellingwood, Mrs. Finley, 2209 Central street, Evanston, Ill.
Foltz, Mrs. E. G., M. D., Perry, Iowa.
Gemmill, Mrs. W. T., Forest, Ohio.
Graves, Mrs. N. A., 518 W. Chicago avenue, Chicago, Ill.
Green, Mrs. A. K., Kirkwood, Ga.
Harvill, Mrs. J. P., 1005 S. Market street, Nashville, Tenn.
Helbing, Mrs. H. H., 4235 W. Bell place, St. Louis, Mo.
Holmes, Mrs. M. E., Milan, Tenn.
Johnson, Mrs. Geo. W., Laurel Heights, San Antonio, Texas.
Ketchum, Mrs. M. B., Richard's block, Lincoln, Neb.
Kinnett, Mrs. W. E., Yorkville, Ill.
Lloyd, Mrs. J. W., Station H., Norwood, Ohio.
Mercer, Mrs. B. W., Tiffin, Ohio.
Miles, Mrs. C. E., 126 Warren street, Boston Highlands, Mass.
Morey, Mrs. M. B., M. D., Gonzales, Texas.
Morrow, Mrs. Sarah F., M. D., Nobility, Texas.
Quigg, Mrs. C. E., Tomah, Wis.
Richardson, Miss E. H., M. D., 835 Cedar street, Quincy, Ill.
Rounsavell, Mrs. Myron W., Hayward, Wis.
Russell, Mrs. H. A., Summer street, St. Ipswich, Mass.
Scudder, Mrs. J. H., 1009 Plum street, Cincinnati, Ohio.
Sibley, Mrs. J. T., Kensington, Borough of Brooklyn, N. Y.
Sloan, Mrs. N. M., M. D., 905 Ligonier street, Latrobe, Pa.
Standlee, Mrs. E. L., 2932 N. 23d street, St. Louis, Mo.
Stevens, Mrs. J. V., Jefferson, Wis.
Thomas, Mrs. R. L., 792 McMillan street, Walnut Hill, Cincinnati, Ohio.
Vincent, Mrs. A. W., 43 W. Washington street, Valparaiso, Ind.
Wheat, Mrs. Mira, 835 Cedar street, Quincy, Ill.
Whitford, Mrs. S. K., M. D., 210 Dundee street, Elgin, Ill.
Williams, Mrs. David, 120 Jefferson avenue, Columbus, Ohio.

PREAMBLE,

ACT OF INCORPORATION

CONSTITUTION, BY-LAWS

AND

STANDING RESOLUTIONS

OF THE

National Eclectic Medical Association.

Whereas, The right of doing good transcends all statutory and other enactments, and the profession of healing is therefore radically a sacred one, to be exercised by any and every person duly qualified by natural endowments and acquired skill and knowledge; and

Whereas, The practice of medicine has become conformed to the genius of the nineteenth century, and is no more the secret art of a sacerdotal caste or privileged order, to be hedged about by penal laws, ethical codes, or other instruments of barbarism and oppression, but has become the lawful vocation of citizens, like other callings; and

Whereas, The Constitution of the United States of America, the constitutions of the several states, and the laws enacted in conformity with them, assure and protect this right of medical practice, and all legislation, political favor, or other discrimination tending to restrict or contravene the right, especially for the purpose of fostering any school of practice under the pretext of regularity, or superior scientific knowledge, is a violation of the spirit, if not of the express provision of those instruments, and ought to be discountenanced, disregarded, opposed and resisted as a departure from the principles of Republican government, as well as of natural right; and

Whereas, The Reformed practitioners of medicine have the same and every right to the encouragement and protection of

government as physicians of other schools, and all good citizens; and

Whereas, The Legislature of the State of New York did, for the promotion of science and the establishment of an improved practice of medicine, enact the following Act of Incorporation:

AN ACT to incorporate THE NATIONAL ECLECTIC MEDICAL ASSOCIATION—Passed March 27, 1871.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. John Wesley Johnson, Stephen H. Potter, J. S. Cowdry, William Molesworth, R. A. Gunn, J. C. Hulbert, James M. Comins, Benjamin J. Stow, Robert S. Newton, William Jones, Herod D. Garrison, J. M. Harding, S. B. Munn, Dennis E. Smith, Horatio E. Firth, and those associated with them, are hereby associated a corporation, under the name of "The National Eclectic Medical Association," with the full rights and powers for the purpose of this act as natural persons.

SEC. 2. The object of this Association shall be to maintain organized coöperation between physicians for the purpose of promoting the art and science of medicine and surgery and the dissemination of beneficial knowledge and an improved practice of medicine.

SEC. 3. The business of said corporation shall be managed by its Executive Committee consisting of its President, Secretary, Treasurer, and such other officers as the Association shall designate; and elections shall be held annually, as provided by the Constitution. All persons so elected shall hold office for the term of one year, and until their successors are chosen. The persons elected in September last as officers of said corporation shall hold office till such election of successors. At all meetings of said Association fifteen members shall constitute a quorum for the transaction of business.

SEC. 4. The said corporation shall be subject to the provisions of title third, chapter eighteen, of the first part of the Revised Statutes and to the general laws for the government of scientific and benevolent associations so far as the same may be applicable and not inconsistent with the provisions of this Act; and

Whereas, This Association has been duly organized in accordance with the provisions and purposes of the aforesaid statute;

We, the members of the Eclectic School of Medicine, subscribing in good faith to the doctrine and principles of Reformed Medicine, as formulated and announced from time to time, and duly proclaimed, do now adopt the following:

CONSTITUTION.

ARTICLE I.—NAME.

This Society shall be known by the name of THE NATIONAL ECLECTIC MEDICAL ASSOCIATION.

ARTICLE II.—OBJECT.

The object of this Association shall be to maintain organized coöperation between physicians for the purpose of promoting the art and science of medicine and surgery and the dissemination of beneficial knowledge and an improved practice of medicine.

ARTICLE III.—MEMBERSHIP.

This Association shall consist of such permanent members as duly become such and conform to the requirements and regulations; also, of delegates appointed by local and state associations in sympathy with this Association and its objects. The permanent members shall have full power and acknowledgment as such while acting in coöperation with this Association, and delegates shall have and exercise the power and privileges of members, subject to the By-Laws and other regulations, for the period of one year.

ARTICLE IV.—OFFICERS AND EXECUTIVE COMMITTEE.

The officers of this Association shall consist of a President, three Vice-Presidents, a Corresponding and a Recording Secretary, and a Treasurer, who shall severally exercise the powers and duties assigned to such officers by the usages of parliamentary and other public bodies. They shall constitute the Executive Committee of the Association for the transaction of all business when the Association is not in session, which has not been delegated to

standing or other committees. The seal of the Association, whenever practical, shall be placed upon all official papers.

Article V.—Committee on Status and Organization.

It shall be the duty of the President to appoint a Committee 'on' 'Status and Organization,' consisting of the Recording Secretary of the N. E. M. A., its Chairman, and the Secretary of each State Eclectic Medical Society, and in states where there is no state society, he shall appoint some member of the National, or other suitable person, who may reside in such state.

It shall be the duty of this committee to meet annually on the evening of the second day of the session, to report the condition of Eclecticism in their respective states, and to discuss ways and means by which a more perfect organization in the state and National Associations may be effected. The report of this committee shall be made to the National on the morning of the third day of the session.

Article VI.—Reports and Essays.

The President shall, within six months of the holding of the annual meeting, designate members as chairmen and secretaries of the various sections, whose duty it shall be to secure papers and reports for such sections, to be submitted at the annual meeting next ensuing. Every member of the Association may, however, communicate to the Association or its Secretary all interesting cases, improvements, discoveries and suggestions, as he shall consider useful, and prepare papers and essays on topics connected with medical science or practice which may, whenever judged of sufficient importance, to be published in the Transactions.

Article VII.—Meetings.

The annual meeting of the association shall convene on the third Tuesday of June, at 10 o'clock a. m., at such a place as the Electoral Committee may designate; but the Executive Committee of the National Association may change the time and place of meeting, in case some emergency should arise in which it would be detrimental to meet as provided by the Electoral Committee. The period of holding the meeting shall be three days.

ARTICLE VIII.—AMENDMENTS.

Amendments may be made to the Constitution and By-Laws at any regular meeting, notice having been given at a previous annual meeting, and provided such notice has been printed in the announcement to the members of this Association, by the vote of not less than two-thirds of the members present.

BY-LAWS.

ARTICLE I.—MEMBERSHIP.

SECTION 1. This Association may receive as permanent members such persons graduates of regularly organized medical colleges, or physicians of fifteen years' practice, who are legally qualified to practice in their respective states, as are duly nominated as delegates by a State Eclectic Medical Society, or such local Society, auxiliary to the State Eclectic Medical Society, to which such delegates may belong; also, such applicants for membership from states having no State or District Societies, and who are vouched for by two or more members of this Association; also, persons of high scientific attainments upon the nomination of a member and the recommendation of the Committee on Credentials. Persons of high medical and scientific attainments from other countries may, upon the nomination of a member and the recommendation of the Committee on Credentials, be elected honorary members at the annual meeting next after such meeting.

SEC. 2. Every State Medical Society in sympathy with this Association and its purposes, and every local or district society auxiliary to such society, and every medical college that is in good standing are authorized to appoint delegates annually to the Association.

SEC. 3. The credentials of delegates shall set forth their academic rank, the institution at which they received the degree of Doctor of Medicine, and the time during which they have been engaged in the practice. These credentials, when accompanied by the initiation fee, shall be duly referred without reading, unless such reading be asked for, to the Committee on Credentials for action. Such committee shall post in a conspicuous manner, in the place of meeting, all names referred to them before action is taken on the same.

Section 4. It shall be the duty of the Secretary of each State or Local Society in affiliation with the National Eclectic Medical Association to report annually to the Secretary of the National Eclectic Medical Association the name of each person who, for any cause, has forfeited his fellowship in said State or Local Association, which report shall be read to the National Eclectic Medical Association.

ARTICLE II.—FEES AND DUES.

SECTION 1. Every person duly elected as a permanent member of this Association shall complete such membership by paying an initiation fee of seven dollars. He shall also report any change of residence annually, to the Secretary, within one month from the time of holding the annual meeting; and shall likewise, after the first year, pay an annual due of five dollars. Worthy members of this Association and former Presidents can, upon resolution adopted at any meeting by a majority vote of not less than two-thirds of all members present, be exempted from the provisions of this section, except so far as relates to the reporting of name and residence, as aforesaid, and such members shall be designated Exempt Members.

SEC. 2. It shall be the duty of the Treasurer, on the second day of the annual meeting, and also on the day ensuing, to report the name of every member in arrears for dues, in open session, for the action of this Association.

SEC. 3. Each permanent member shall be entitled to a certificate of membership, duly authenticated by the seal of the Association, and the signatures of the President and Secretary. He shall, on the payment of the annual dues, be entitled to a printed volume of the Transactions. Members in arrears for more than two years' dues shall not be entitled to exercise the rights of membership.

SEC. 4. The omission to pay dues for two years shall be equivalent to a surrender of membership. Persons who are arrears for dues may be entitled to the full right of membership by payment of such arrearages.

ARTICLE III.—ETHICS.

SECTION 1. The members of this Association shall exercise toward each other, toward all physicians, Eclectics especially, and toward all mankind, that courtesy and just dealing to which

every one in his legitimate sphere is entitled, and any departure therefrom shall be deemed unprofessional, undignified, and unworthy an honorable practitioner of an honorable profession. It shall also be regarded as unbecoming to engage in any form of practice or of advertising which shall tend to lower the physician in the esteem of the community, or to reflect discredit upon his professional associates.

ARTICLE IV.—DISCIPLINE OF MEMBERS.

SECTION 1. Any member may be officially censured, invited to withdraw, or be expelled from membership for improper conduct or a violation of professional comity, but it shall be necessary for a specific charge to be made in writing, one copy to be presented to the accused, or some person acting in his behalf, and another to be in the hands of the President, one month before the time for holding a regular meeting.

SEC. 2. All professors or officers of colleges voting or otherwise coöperating in the conferring of the degree of Doctor of Medicine, on any person not duly entitled to the same by the necessary attendance on medical lectures and thorough examination, shall be considered as liable to the penalties enumerated in this article.

SEC. 3. A member of this Association who commends a proprietary medicine which is advertised to the public, whether the formula be known or not, may be considered guilty of unprofessional conduct, and may be, upon proof duly shown, censured and allowed to withdraw by returning his certificate of membership to the Association, or be expelled.

SEC. 4. Any person expelled from this Association shall not be received as a delegate to this Association until the Society, whether state or local, to which he shall belong, shall show sufficient cause for reinstatement in this Association.

ARTICLE V.—DEGREE OF DOCTOR OF MEDICINE.

SECTION 1. Medical colleges that are recognized as in good standing with this Association are entitled to send delegates and to be recognized in the Electoral Committee for the election of officers and the selection of the place of meeting. The schedule of requirements for graduation of students in medical colleges recognized by the National Eclectic Medical Association shall be the same as are prescribed by and fulfilled in the minimum re-

quirements of the National Confederation of Eclectic Medical Colleges.

SEC. 2. The National Confederation of Eclectic Colleges shall be under the direction of the National Eclectic Medical Association. All matters pertaining to the study of medicine in medical colleges shall be referred to the National Confederation for their action. The National Confederation of Eclectic Medical Colleges shall report all business transacted at the annual meeting of the National Association for approval.

ARTICLE VI.—ELECTION OF OFFICERS.

SECTION 1. At every annual meeting of the Association, upon the third day of the session, there shall be an Electoral Committee chosen by the members and delegates, as follows: The members representing each state in this Association, and residing in the state they represent, shall elect, by majority vote, two members, and the delegates from each medical college recognized by and represented in this Association shall elect one member of the Electoral Committee, and a majority of the Electoral Committee having convened and duly organized, shall elect the officers of the Association, and select the next place of meeting by ballot.

ARTICLE VII.—DUTIES OF OFFICERS.

SECTION 1. The President shall have general supervision of the Association, and shall appoint the following standing committees:

1st. On affairs of medical colleges: A permanent committee to consist of one member from each college, whose duty it shall be to consider such contingent matters as may arise concerning the status of medical institutions, and to whom shall be referred all complaints and disputes of matters relating to medical colleges, without debate.

2nd. On grievances: An Annual Committee to consist of five members, appointed at its earliest convenience, to whom shall be referred all complaints and disputes between members, and charges against members of unprofessional conduct.

3rd. On medical legislation: An Annual Committee consisting of one member from each state. To this committee shall be referred, without motion, all matters pertaining to the enactment and enforcement of laws for the regulation of the practice

of medicine in the several states affecting the status of Eclectic medical colleges and Eclectic physicians of such states.

4th. Finance Committee, consisting of three members, to whom shall be referred all matters of expense for the ensuing year, excepting such expenses as may be considered current expenses. It shall be the duty of this committee to audit the accounts of the Secretary and Treasurer, and report at the annual meeting at such times as the report may be called for.

5th. A Committee on Status and Organization as provided for in the Constitution of the National Eclectic Medical Association.

SEC. 2. The Vice-Presidents are to coöperate with the President in furthering the interests of this Association, and in case of his absence or death, assume his office in their respective order.

SEC. 3. The Recording Secretary shall have charge of the proceedings of this Association, and shall act as custodian for the property of the same. He shall keep the records of the meeting, and shall keep a complete file of all books and papers belonging to the Association. He shall act as editor of the Transactions, and, in connection with the President and Treasurer, shall act as the Publishing Committee. At the expiration of his official term he shall turn over to his successor, in good order, the appurtenances of his office.

SEC. 4. The Recording Secretary and Treasurer shall receive, as remuneration for services rendered, their traveling expenses to and from the meetings, together with hotel bills.

SEC. 5. The Corresponding Secretary, in addition to the usual duties of such office, at the direction of the President, shall have charge of and make arrangements for the meetings of the Association, and shall procure reduced railroad rates, and otherwise aid the officers in the performance of their work.

SEC. 6. The Treasurer shall collect and disburse and have charge of all moneys belonging to the Association, and shall keep an accurate account between the Association and its members, collecting all dues, and paying all current and other bills approved by the Finance Committee. He shall render a statement, at the close of each fiscal year, of his receipts and his disbursements.

ARTICLE VIII.—QUORUM.

SECTION 1. Fifteen members at any regular meeting shall constitute a lawful number for the transaction of business; but a smaller number may receive reports.

ARTICLE IX.—PAPERS AND ESSAYS.

SECTION 1. All papers designed for this Association shall be accepted and read, or referred by title in its appropriate section, and become the property of the Association. In the absence of the officers of any section, the vacancy shall be filled by an appointment by the President.

SEC. 2. The Chairman of each section shall convene his section at the earliest possible opportunity, and all papers that have been submitted shall be considered, and the recommendation of the section communicated to the Association. The reading of each essay is not to consume more than fifteen minutes, and no member shall speak more than twice on the same subject, nor consume above three minutes. The entire discussion is not to occupy more than thirty minutes.

ARTICLE X.—TRANSACTIONS.

SECTION 1. All papers read or submitted by title to this Association shall be considered its property, to be published at the discretion of the Publishing Committee in the Annual Transactions, though members may reserve the right, if they wish, to copyright the same, the fact to be so stated in the published reports of the Association. All papers for publication in the Transactions shall be in the possession of the Recording Secretary within sixty days after the close of the annual meeting of the Association.

SEC. 2. The Transactions shall be published annually, bound in cloth, and the Recording Secretary is authorized to present copies to public libraries or State Boards of Medical Examiners and other bodies when, in the judgment of the Executive Committee, the welfare of this Association would be enhanced thereby.

STANDING RESOLUTIONS.

[As standing resolutions, though often but an expression of sentiment, have really the importance of by-laws, when relating to business, the Secretary, pursuant to instructions, has omitted from the category all those which have, subsequent to their adoption, been incorporated into the Constitution and By-Laws of the National Association, and also those which have been virtually superseded by others more recently adopted, or which have been rescinded.]

ECLECTIC MEDICAL COLLEGES RECOGNIZED.

Resolved, That the National Eclectic Medical Association recognizes the following Eclectic colleges as being in good standing and recommend that they receive the support of our profession:

(*a*) Eclectic Medical Institute, Cincinnati, Ohio.

(*b*) The American Medical College, St. Louis, Missouri.

(*c*) The Eclectic Medical College of the City of New York, New York City, New York.

(*d*) The Bennett College of Eclectic Medicine and Surgery, Chicago, Illinois.

(*e*) The California Medical College, San Francisco, California.

(*f*) The Georgia College of Eclectic Medicine and Surgery, Atlanta, Georgia.

(*g*) The Lincoln Medical College, Lincoln, Nebraska.

The following institutions were in good standing and should be so considered up to the date at which they ceased to exist:

The United States Medical College, New York City, New York. (1878 to 1882.)

The Eclectic College of Physicians and Surgeons, Indianapolis, Indiana. (1890 to 1894.)

The Iowa Eclectic Medical College, Des Moines, Iowa. (1887 to 1893.)

The Eclectic Medical College of the Drake University, Des Moines, Iowa.

The Beach Medical College, Indianapolis, Indiana. (1885 to 1886.)

The Indiana Eclectic Medical College, Indianapolis, Indiana. (1880 to 1890.)

The Eclectic Medical College of Pennsylvania, Philadelphia. (1856 to 1870.) Not extinct till 1880.

The Worthington Medical College, Worthington, Ohio. (1832 to 1838.)

The Eclectic College of Medicine and Surgery, Cincinnati, Ohio. (1856 to 1859.)

The Syracuse Eclectic Medical College, Syracuse, New York. (1850 to 1857.)

The Worcester Medical College, Worcester, Massachusetts (1848 to 1859.)

The Reform Medical College, New York City, New York. (1836 to 1838.)

Regulations at Meetings.

REFERRING OF CREDENTIALS.

Resolved, That when the credentials of delegates from auxiliary societies are presented they be duly referred without reading, except when such reading shall be asked for.—*Adopted June* 16, 1891.

EXHIBITION OF WARES.

Resolved, That in the future sessions of this Association no exhibitions of pharmaceutical preparations, tables of medicines and surgical instruments, signs, show cards, and circulars of remedies the names of which are secured by trade mark, shall be allowed in the hall used for the deliberations of this Association.—*Adopted June* 22, 1882.

SECTION WORK.

Resolved, That the section work be divided into three (3) divisions, *Medicine, Surgery, Specialties.* That each section be in charge of a Vice-President.—*Adopted June* 21, 1900.

FURTHER REGULATIONS.

Resolved, That in future sessions of this Association all papers submitted to it shall be referred by the President to the proper section.

Resolved, That the Secretary of each section shall submit to the Secretary of the Association a list of all papers in the posses-

sion of each section, with the recommendation of the section thereon, and shall deliver to him all such manuscripts at the close of the session.—*Adopted June* 17, 1881.

LOST CERTIFICATES OF MEMBERSHIP.

Resolved, That the President and Secretary are hereby authorized to duplicate lost certificates on the payment of expenses for the same.—*Adopted June* 19, 1878.

STANDING OF MEDICAL COLLEGES.

Resolved, That no college shall be recognized as a medical college, in good standing, by the Association until it shall have held four annual sessions and have graduated a class, and in all other respects complied with the requirements of the National Confederation of Eclectic Medical Colleges.—*Adopted June* 19, 1901.

MINIMUM REQUIREMENTS OF THE NATIONAL CONFEDERATION OF ECLECTIC MEDICAL COLLEGES.

The following are the minimum requirements of the National Confederation of Eclectic Medical Colleges:

FIRST.—Preliminary Requirements.

1. Creditable certificate of good moral standing.

2. Good English education, to be attested by (a) first grade teacher's certificate; (b) a diploma from a graded high school or literary or scientific college or university; (c) regent's medical student's certificates; (d) entrance examination.

3. An elementary knowledge of natural history, physics and latin.

SECOND.—Advanced Standing.

Graduates from pharmaceutical, dental, and veterinary colleges may be allowed one year's time on a four-year medical course only on condition that they comply with the entrance requirements and pass all examinations and perform all laboratory work embraced in the course of study of the freshman year. One year's advanced standing may be given students with degrees from a recognized literary college who have taken a preparatory medical course.

THIRD.—Course of Instruction.

The course of instruction shall consist of a four-year graded course or its equivalent, as herein prescribed, including four sessions of six months each in four different calendar years.

The following graded course is recommended:

Branches in the Freshman Year.

Anatomy, dissection, osteology, chemistry, physiology, histology, materia medica and pharmacy.

Examinations to be held on all first-year studies, and be final in chemistry, osteology, histology, materia medica and pharmacy.

Branches in the Sophomore Year.

Anatomy, dissection, toxicology, physiology, pathology, bacteriology, therapeutics, physical diagnosis, hygiene, minor surgery and bandaging.

Examinations in all second-year studies, and final in anatomy, toxicology, physiology, pathology, bacteriology, physical diagnosis, hygiene, minor surgery and bandaging.

Branches in the Junior Year.

Practice and principles of medicine, diseases of children, surgical anatomy and operations upon the cadaver, the principles and practice of surgery (including ortheopedic surgery), gynecology, obstetrics, electro-therapeutics, medical jurisprudence.

Examinations in all third-year studies, and final in therapeutics, surgical anatomy and electro-therapeutics.

Senior Year Branches.

Practice and principles of medicine, diseases of children, principles and practice of surgery, gynæcology, obstetrics, diseases of the eye, ear, nose and throat, venereal diseases and dermatology, medical jurisprudence.

In addition to the above branches the students in the junior and senior years are required to attend clinics and autopsies and do practical laboratory work in medical diagnosis.

FOURTH.—Attendance and Examinations.

Regular attendance during the entire lecture course is required, allowance to be made only for absence occasioned by the student's sickness, such absence not to exceed twenty per centum of the course.

Regular examinations or quizzes to be made by each professor or lecturer from time to time during the term.

Final examinations on the branches held, to be conducted by competent examiners.

Each student shall have dissected the lateral half of the cadaver, the dissection to be in two separate years.

Attendance upon clinical and hospital instruction and instruction at autopsies.

FIFTH.—Requirements for Graduation.

Attainment of twenty-one years of age.

Creditable certificate of good moral standing, and good conduct while in college.

Attendance on four courses of medical lectures of six months each, or its equivalent.

Regular attendance during the course of lectures, clinics and quizzes.

Satisfactory examination in all branches, with a rating of not less than seventy per centum average.

Attendance on two courses of lectures on anatomy, and the dissection of the lateral half of the cadaver.

SOCIETIES AUXILIARY TO THE NATIONAL.

Arkansas Eclectic Medical Association.
California State Eclectic Medical Society.
Chicago Eclectic Medical and Surgical Society.
Cincinnati Eclectic Medical Society.
Connecticut Eclectic Medical Association.
Georgia Eclectic Medical Association.
Illinois State Eclectic Medical Society.
Indiana State Eclectic Medical Association.
Iowa State Eclectic Medical Society.
Kansas Eclectic Medical Association.
Kentucky State Eclectic Medical Society.
Maine Eclectic Medical Society.
Massachusetts Eclectic Medical Society.
Michigan State Eclectic Medical and Surgical Society.
Minnesota State Eclectic Medical Society.
Missouri State Eclectic Medical Society.
Nebraska State Eclectic Medical Society
New Hampshire Eclectic Medical Society.
Eclectic Medical Society of the State of New Jersey.
Eclectic Medical Society of the State of New York.
Ohio Central Eclectic Medical Society.
N. W. Ohio Eclectic Medical Society.
Ohio State Eclectic Medical Association.
Oklahoma Eclectic Medical Society.
Oregon State Eclectic Medical Association.
Eclectic Medical Association of Pennsylvania.
S. Dakota Eclectic Medical Society.
Tennessee State Eclectic Medical Society.
Eclectic Medical Association of Texas.
Eclectic Medical Association of the State of Washington.
Eclectic Medical Association of West Virginia.
Wisconsin State Eclectic Medical Society.

LIST OF MEMBERS.

NINETEEN HUNDRED TWO.

[This roll has been duly revised from the latest information in the possession of the Secretary. If any here listed do not receive the Transactions it will be because of a change of location of which the Secretary has not been informed, or because of the Constitutional inhibition—By-Laws, Article II, Section 4.

[The President and former Presidents are named in small capitals, honorary members in italics, members exempted from the payment of annual dues by the designation *ex.*]

Year.

Abbott, F. W., 72 Broadway, Taunton, Mass.....1890
Alexander, John H., Mukwonago, Wis.....1877
Alexander, B. J., Hiawatha, Kan.....1890
Allen, Nathan L., 184 Boylston St., Boston, Mass.....1895
Aylsworth, George M., Collingwood, Can.....1901

Bailey, Leonard, Middletown, Conn.....1882
Bailor, L. D., Lead City, S. D.....1898
Bainbridge, J. C., San Francisco, Cal.....1896
BAKER, VINCENT ALEX., 31 W. Maumee St., Adrian, Mich..1870
Baldwin, Zell L., Niles, Mich.....1897
Ballington, P. F., Gridley, Cal.....1896
Band, Charles, ex., Monroe, Ore.....1878
Bangert, John R., Shippenville, Clarion County, Pa.....1894
Baurichter, C. H., ex.....1885
Beals, F. M., Mattoon, Ill.....1901
Beem, Elmer C., Oscoda, Iosco County, Mich.....1885
Bell, George W., Okmulgee, Choctaw Nation, I. T.....1892
Belknap, Milton C., Mayville, Chautauqua County, N. Y...1890
Bennett, Rorick, 38 Winter St., Detroit, Mich.....1899
Bentley, Jessie E., 1124 Asylum St., Knoxville, Tenn.....1894
Bergstrom, E. Algernon, 9034 Superior Av., S. Chicago, Ill..1899

Best, William P., 2218 E. 10th St., Indianapolis, Ind.....1898
Binkenhauer, Henry J., 216 E. 17th St., New York.....1901
Bishop, T. S., Albany, Mo.....1899
Blackfan, H. T., Cambridge, N. Y.....1898
Blackman, Edson, Quincy, Branch County, Mich.....1876
Blaich, Julia E., 4064 Old Manchester Ave., St. Louis, Mo..1895
Blaisdell, R. H., Sheridan, Mich.....1899
Blake, S. L., Weaverville, Cal.....1896
Blosser, H. V., Chalmers, Ind.....1902
BLOYER, WILLIAM E., The Lancaster, 22 W. 7th St., Cincinnati, Ohio 1887
Borland, J. R., Franklin, Pa.....1892
Bostick, John C., Benton Harbor, Mich.....1902
BOSKOWITZ, GEORGE W., 40 E. 41st St., New York City...1882
Bradshaw, H. G., Bluffton, Ohio.....1897
Branch, Lyman T., Sechlerville, Jackson County, Wis.....1885
Brandenburg, Chas. W., 223 E. 14th St., New York City...1900
Brewer, Jay B., Jefferson, Wis.....1897
Brockman, H. H., Eldon, Miller County, Mo.....1895
Bronson, Eugene E., Ganges, Allegan County, Mich.....1892
Brothers, C. E., Mineral Point, Ohio.....1899
Brothers, Isaiah, 902 Mahoning Ave., Youngstown, Ohio...1882
Brown, G. W., 701 York St., Newport, Ky.....1895
Bryan, Robert C., Kathleen, Houston County, Ga.....1886
Buckland, W. O., 1370 Franklin St., Oakland, Cal.....1896
Bunch, R. A., Muncie, Ind.....1898
Burlington, James C., Attica, Fountain County, Ind.....1885
Burleigh, C. A., Forest Hill, Cal.....1896
Burns, John W., Viola, Wis.....1902
Burroughs, George M., Bridgeport, Conn.....1895
Busby, Isaac M., Brooklyn, Iowa.....1889

Cain, J. M., Halsey, Ore.....1896
Cameron, Ella V., 564 Lexington Ave., New York City....1900
Campbell, James H., Allen's Grove, Wis.....1887
Canfield, Moses, Frankfort, Ind.....1892
Cannon, Chas. M., 946 Raymond Ave., St. Paul, Minn.....1901
Carper, D. W., Henning, Ill.....1902
Carriker, Malachi, Nebraska City, Neb.....1892
Carter, Edwin H., 407 W. Walnut St., Des Moines, Iowa..1890
Case, E. W., Mystic Conn.....1895

Cate, J. L. T., Coldwater, Miss.....1901
Chapman, L. H., Lorimar, Iowa.....1892
Church, W. B., Holland, Mich.....1902
Church, Eloise I., 41 W. 94th St., New York City.....1887
CLARK, ANSON L., 106 Spring St., Elgin, Ill.....1870
Clark, Byron, Laboratory, Pa.....1882
Clay, Mark T., Little Rock, Ark.....1887
Clayburg, P. C., 1015 Chemical Building, St. Louis, Mo...1902
Clotts, D., Black Lick, Ohio.....1899
Coe, George D., Carthage, Mo.....1901
Coffin, Orlando S., Carthage, Ind.....1894
Cole, Charles E., Prairie du Chien, Wis.....1893
Cole, Edgar, Holmesville, Ohio.....1894
Cook, F. S. W., 625 Stickney Ave., Toledo, Ohio.....1901
Cooms, J. L., Grass Valley, Cal.....1896
Cooper, John, Masonic Temple, Des Moines, Iowa.....1886
Colvin, W. H., 1103 Montrose Ave., Chicago.....1902
Conway, C. D., Brooklyn, Iowa.....1884
Conley, C. W., Eaton, Ohio.....1901
Converse, F. B., Westford, Conn.....1895
Converse, H. H., Eastford, Conn.....1888
Cornwall, F., 208 Mason Ct., San Francisco, Cal.....1896
Cosford, J. W., Mancelona, Mich.....1888
Cosford, Mary B., Mancelona, Mich.....1888
Crawford, R. B., 101 1-2 Adams St., Chicago.....1901
Crawford, Wm. J., 128 W. Washington St., Jackson, Mich..1888
Crismore, James M., Helena, Ohio.....1884
Crismore, W. E., Helena, Ohio.....1895
Crowell, F. B., Lawrence, Mich.....1902
Cummings, H. B., Seward, Neb.....1898
Curry, H. E., Baker City, Ore.....1895

Daniels, C. J., ex., Cisco, Texas.....1877
Daniel, Marquis E., Honey Grove, Texas.....1890
Darrin, Sidney J.....1890
Davidson, Eric A., 319 E. Division St., Chicago, Ill.....1898
Davidson, Alex. W., Poplar Bluff, Mo.....1898
Davis, Elijah F., 452 Pearl St., Cleveland, Ohio.....1890
Davis, J. B., Pontiac, Ill.....1900
Davis, S. A., Salem, Ore.....1896
Day, George H., Monroe, N. Y.....1890

DeLacey, A. J. H., Boyne City, Mich.....1899
Deimel, H. L., Santa Barbara, Cal.....1896
Doll, Henry J., 211 W. 69th St., New York City.....1900
Dowdell, Charles, Ennis, Texas.....1891
Downey, Edward L., Middleport, N. Y.....1890
Downs, L. S., Galveston, Texas.....1899
Drossner, Morris, 566 Bergen Ave., Jersey City, N. J.....1894
DUNCAN, JOSEPH R., ex., 224 S. Washington St., Crawfordsville, Ind.....1870
Dunlop, Clark W., 112 W. 86th St., New York City.....1882
Duvall, B. E., 293 Courtland Ave., Atlanta, Ga.....1901
Duvall, Florence T., 608 Lowndes Building, Atlanta, Ga....1900
Duvall, J. R., 101 1-2 Whitehall St., Atlanta, Ga.....1899
Dwyer, Charles S., Springfield, Pa.....1894

Ekermeyer, Charles W., Montgomery, Ohio.....1900
Ellingwood, Finley, 100 State St., Chicago, Ill.....1887
Ellingsen, Elling H., Calmar, Iowa.....1900
Emery, Louisa M., Leipsic, Ohio.....1900
Entz, J. C., Hope, Kan.....1898
Evarts, Henry P., 1575 Burton Ave., Grand Rapids, Mich..1893
Ewing, Cicero M., Tyrone, Pa.....1883

Faber, George A., 45 Center St., Waterbury, Conn.....1888
Farabough, J. A., Clinton, Ky.....1901
FARNHAM, EDWARD J., 103 State St., Chicago, Ill.....1889
Fearn, John, 1165 Clay St., Oakland, Cal.....1888
Felter, H. W., 1733 Chase Ave., Cincinnati, Ohio.....1896
Fisher, Samuel B., Rossville, Ind.....1878
Fitch, Charles W., 640 Madison Avenue, New York City...1893
Fleming, Nancy A., 1107 W. 9th St. Des Moines, Iowa....1893
Foltz, Eloise G., Perry, Iowa.....1898
Foltz, Kent O., 105 Odd Fellows Building, Cincinnati, Ohio.1899
Foote, Edward B., 120 Lexington Ave., New York City...1873
Foreman, L. D., Waverly, Ill.....1897
Forest, J. H., Marion, Ind.....1901
Forrester, Jesse G., 479 Fullerton Ave., Chicago, Ill.....1897
Fossett, Algernon, 110 North St., Portland, Me.....1884
Foster, Samuel G., Franklin, Pa.....1894
Foster, M. T., Olney, Ill.....1889

Foster, Francis V., Springwater, N. Y.....1894
Francis, C. H., 531 Burling St., Chicago, Ill.....1895
Freeman, Edwin, 93 McMillan St., Cincinnati, Ohio.....1894
Freeman, E. R., Cincinnati, Ohio.....1899
Fuller, George T., Mayfield, Ky.....1892

Gabel, Henry G., Aurora, Ill.....1887
Galleher, Pierre, Laurens, Iowa.....1898
Garth, Thomas, Clarion, Iowa.....1884
Gaston, William, Goodhope, W. Va.....1894
Gauvreau, Edward T., Superior, Wis.....1887
Geddes, Peter S. W., Winchendon, Mass.....1892
GEMMILL, W. T., Forest, Ohio.....1879
Gere, G. G., 225 Geary St., San Francisco, Cal.....1896
Gibbs, C. A., St. Louis, Mo.....1887
Goodenough, Joseph, Clarkton, Mich.....1880
Goodale, J. R., 949 Union St., Oakland, Cal.....1896
Grant, Mariette, Woodlawn, L. I, N. Y.....1900
Graves, H. S., Hurley, S. D.....1902
Graves, N. A., 518 W. Chicago Ave., Chicago, Ill.....1897
Graves, F. E., Hinckley, Ill.....1897
GREEN, MILBREY, 567 Columbus Ave., Boston, Mass.....1874
Gregg, E. H., Brandt, Ohio.....1898
Gress, P. C., 701 Commercial St., Atchison, Kan.....1895
Gridley, F. D., Binghampton, N. Y.....1895
Griffith, B. A., Swan Creek, Ill.....1902
Grigsby, Ulysses G., Gilmore City, Iowa.....1899
Grossman, Franz, 36 Graham Ave., Brooklyn, N. Y.....1898

Haifley, W. H., Amboy, Ind.....1901
Halbert, Pleasant W., Cyruston, Tenn.....1889
Halbert, T. E., Nashville, Tenn.....1895
Halbert, William H., Nashville, Tenn.....1886
Hamblin, J. M., St. Joseph, Mo.....1898
Hamilton, J. W., 1618 Folsom St., San Francisco, Cal.....1896
Hammersley, J. B., 245 Main St., Northampton, Mass.....1897
Hankwitz, Paul G., 1202 Killikinick St., Milwaukee, Wis..1902
Hankwitz, Carl .. Milwaukee, Wis.....1896
Harbert, J. P., Bellfontaine, Ohio.....1902
Hardy, Samuel A., 239 E. 32d St., New York.....1901
Harding, W .O. C., Elmwood Place, Ohio.....1899

Harrod, Morse, Fort Wayne, Ind.....1902
Hartley, Charles A., 150 W. Cherry St., Troy, Ohio.....1885
Harvison, D. B., Star Lake, Wis.....1897
Harvey, G. W., Watsonville, Cal.....1898
Harvey, Welch R., Dana, Ill.....1892
Harvill, J. Paul, 1005 S. Market St., Nashville, Tenn.....1901
Hatfield, Franklin P., Grenola, Kan.....1891
Hathcock, Giles, Bellton, Ga.....1892
Hauss, Augustus P., E. Market and 14th Sts., New Albany, Ind.....1891
Hauss, Q. Robert, Sellersburg, Ind.....1899
Hawkey, W. G., Belvidere, Ill.....1902
Hawley, William H, 21 Wagener St., Penn Yan, N. Y....1878
Hayden, William R., Bedford Springs, Mass.....1870
Hays, James, Dayton, Ohio.....1901
Hazen, John H., Dempseytown, Pa.....1884
Heacker, W. J., Bean's Station, Tenn.....1889
Heeve, W. L., 302 Sumner Ave., Brooklyn, N. Y.....1900
Helbing, Gustave, Bonham, Texas.....1896
Helbing, H. Hugh, St. Louis, Mo.....1901
Henderson, H. L., Astoria, Ore.....1890
Henderson, W. H., 806 1-2 12th St., Sacramento, Cal.....1886
Henry, Meredith, W., ex., Waelder, Gonzales County, Tex..1885
Herrick, L. F., 1115 Broadway, Oakland, Cal.....1896
Herring, N. A., 149 Pipestone St., Benton Harbor, Mich...1899
Herrington, J. J., Wardner, Idaho.....1896
Hervey, C. H., Rowland Building, San Jose, Cal.....1896
Herzog, Alfred W., 154 E. 30th St., New York.....1901
Hill, George R., Kendall, Wis.....1891
Hinds, Mrs. Harriet C., 32 W. Grove St., E. Orange, N. J..1889
Hipp, W. Harrison, 100 State St., Chicago, Ill.....1893
Hite, George M., 610 Monroe St., Nashville, Tenn.....1889
Hogan, Sarah J., 488 W. Taylor St., Chicago, Ill.....1893
Hollingsworth, A. S., Urbana, Ind.....1899
Holmes, George W., Sharpes, Fla.....1901
Holmes, David W., Bellevue, Texas.....1901
Holmes, Robert Edwin, 716 N. 6th St., Harrisburg, Pa....1900
Holmes, William N., Milan, Tenn.....1899
Homsher, George W., Camden, Ohio.....1884
Hoover, Eli M., N. W. cor. 2d and Chestnut Sts., Halstead, Kan.....1890
House, Jacob C., Port Townsend, Wash.....1891

Howes, Pitts Edwin, 703 Washington St., Dorchester Dist., Boston 1895
Hoxsey, John H., Spangle, Wash..... 1897
Hubbard, B. R., Sandusky, Ohio..... 1895
Hubert, J. Frank, 6859 Halsted St., Chicago, Ill..... 1893
Hudson, Thomas P., Maize, Kan..... 1897
Hudson, W. C., Mulberry, Ark..... 1901
Hull, E. S., Milton Junction, Wis..... 1902
Hull, J. S., Hicksville, Ohio..... 1899
Hunsaker, H. W., 114 Geary St., San Francisco, Cal..... 1896
Hunt, Frank O., Fall River, Wis..... 1895
Hyde, George W., 502 S. Madison St., Clinton, Ill..... 1881

Irwin, Elizabeth, 153 E. 47th St., New York City..... 1901

Jewett, Nathaniel, 7 Water St., Ashburnham, Mass..... 1871
JOHNSON, G. W., 104 1-2 E. Houston St. San Antonio, Tex.. 1891
Johnson, Wm. T., Pawnee City, Neb..... 1897
Johnson, W. S., Corning, Iowa..... 1897
Jones, B. K., Kenton, Ohio..... 1900
Jones, O. L., 856 Broadway, Oakland, Cal..... 1896
Jurgensohn, B. G., Manawa, Wis..... 1895

Kannell, J. W., Fort Wayne, Ind..... 1902
Kaufman, Anna G., 216 E. Lincoln St., Goshen, Ind..... 1891
Kelleghan, T. F., Santa Barbara, Cal..... 1896
Kemper, A. D. H., Sedgwick, Kan..... 1897
Keith, L. S., Towanda, Ill..... 1900
Ketchum, Marshall B., Richards Block, Lincoln, Neb..... 1900
Keys, Jerome M., Dodge and 16th Sts., Omaha, Neb..... 1897
Killough, R. S., Spring Hill, Ky..... 1901
King, G. W., King's Station, N. Y..... 1893
Kinnett, W. E., Yorkville, Ill..... 1887
Kirchgessner, Emil, Medford, Ore..... 1896
Kirk, M. A., ex., Bellefonte, Pa..... 1893
Kirk, Thomas, Jr., Burr Oak, Kan..... 1895
Klahr, Frank P., Horicon, Wis..... 1902
Krausi, William J., 216 E. 17th St., New York City..... 1900
Kuykendall, J. A., Portland, Ore..... 1896

Lachlan, Charles M., Elwell, Mich..... 1899
Laflin, Harvey B., 112 S. 11th St., LaCrosse, Wis..... 1880

Lakin, Charles, 58 London Road, Leicester, England.....1890
Lampman, J. C., Hastings, Mich.....1899
Latta, E. J., Kenesaw, Neb.....1897
Laws, Leonard B., Stanford, Mo.....1899
Leachman, J. S., Higley, Okla.....1899
Leister, William L., Rogers, Ark.....1899
Leming, Elijah, Dardanelle, Ark.....1889
Linquist, M. F., 120 Olive St., New Haven, Conn.....1872
Lloyd, Charles, 3 Clinton St., Cambridge, Mass.....1900
Lloyd, John Uri, Cincinnati, Ohio.....1898
Locke, F. J, 724 Monmouth St., Newport, Ky.....1874
Logan, M. H., 16 Geary St., San Francisco, Cal.....1896
Loggan, Robert O., Philomath, Ore.....1891
Long, Henry, 232 Massachusetts Ave., Indianapolis, Ind...1874
Loomis, John, Jeffersonville, Ind.....1887
Loughridge, W. K., Pleasant Dale, Neb.....1897
Louther, James M., 435 Main St., Somerset, Pa.....1890
Lovette, Jay A., Carson City, Mich.....1892
Luddington, L. S., ex., 195 Arch St., New Britain, Conn...1881

Maclean, Daniel, 710 Van Ness Ave., San Francisco, Cal...1891
Mallory, Charles A., Oreana, Ill.....1899
Manion, Florence S., Portland, Ore.....1897
Maple, W. W., Des Moines, Iowa.....1898
Marks, W. L., 705 S. Division St. Grand Rapids, Mich.....1890
Martin, F. K., Wenona, Ill.....1896
Martin, Noah R., Newark, N. J.....1871
Matchette, Frank, Wardner, Idaho.....1896
Matthews, Albert L., Calloway, Neb.....1893
Mattner, E. H., 505 Van Ness Ave., San Francisco, Cal....1896
McCann, J. D., Monticello. Ind.....1892
McClanahan, J. T., Boonville, Mo.....1897
McConnell, G. W., Oregon City, Ore.....1895
McCroskey, James A., Otley, Iowa.....1891
McCurdy, Columbus, Vermont, Ill.....1892
McElHinney, F. B., New London, Ohio.....1899
McElHinney, J. H., New London, Ohio.....1898
McKlveen, J. A., Chariton, Iowa.....1870
McKee, David B., 1st Ave., E. Hutchinson, Kan.....1881
McLeod, W. O., 502 W. 4th St., Santa Anna, Cal.....1896
McMillen, Bishop, Columbus, Ohio.....1895

Mehrmann, H. B., 852 Isabella St., Oakland, Cal.....1896
Mendel, E. A., St. Joseph, Mo.....1898
Mercer, B. W., Tiffin, Ohio.....1899
Michner, Homer, Wichita, Kan.....1891
Migrath, John W., 125 Cotton Ave., Macon, Ga.....1887
MILES, C. EDWIN, 126 Warren St., Boston Highlands, Mass.1871
Miles, T. Willis, 17th and Stout Sts., Denver, Colo.....1883
Miller, Byron E., 3rd and Washington Sts., Portland, Ore..1896
Miller, C. N., 3443 18th St., San Francisco, Cal.....1896
Miller, Hiram G., LaCrosse, Wis.....1884
Mitchell, F. P., Redding, Cal.....1896
Mitchell, J. C., 1004 5th St., Louisville, Ky.....1902
Morey, Mary B., Gonzales, Texas.....1901
Monroe, James A., Wheeling, W. Va.....1890
Moore, R. Malachi, Walesca, Ga.....1886
Morehard, F. L., 291 3rd Ave., New York City.....1900
Morrow, Sarah F., Nobility, Texas.....1901
Mott, W. S., 470 Commercial St., Salem, Ore.....1896
Muir, Leonard, Alvo, Neb.....1889
Mulligan, Thomas, 126 Camp St., New Britain, Conn.....1888
Mundy, W. N., Forest, Ohio.....1888
MUNN, STEPHEN B., 35 Leavenworth St., Waterbury,Conn.1870

Nafe, George W., Freemont, Mich.....1899
Nifer, Frank J., Brimfield, Ind.....1888
Niles, Augustus, Wellsboro, Pa.....1893
Noble, Frederick A., 210 Taylor St., Seattle, Wash.....1897
Nolan, John P., 41 Charlton St., New York City.....1889
Norriss, H. C. R., Winnetka, Ill.....1902

O'Brien, S. F., Hillsboro, Ky.....1901
O'Neal, L. P., Mechanicsburg, Pa.....1895
Osborn, J. W., Dyersville, Iowa.....1895

Packer, E. B., 622 Market St., Osage City, Kan.....1899
Park, Anna E., 517 W. 23rd St., New York City.....1881
Patterson, W. M., Fremont, Wash.....1891
Perrins, John, 218 Tremont St., Boston, Mass.....1874
Phillips, C. R., Wilton, Wis.....1886
Pickerell, W. C., Keystone, Iowa.....1893
Pierce, C. E., Little Rock, Ark.....1901
Pollock, Wm. John, 518 W. Chicago Ave., Chicago, Ill.....1902

Pomroy, T. W., 15 W. 70th St., New York City.....1895
Pond, F. L., Aurora, Ill.....1880
Postle, W. E., W. Jefferson, Ohio.....1899
Potter, George E., 87 Halsey St., Newark, N. J.....1879
Powell, F. T., 58 1-2 Peachtree St., Atlanta, Ga.....1886
Powers, Everett, Monett, Mo.....1892
Prall, Arthur A., Pilot Mound, Iowa.....1897
Pratt, H. P., Masonic Temple, Chicago.....1902
Price, V. C., Illinois and Cass Sts., Chicago, Ill.....1870

Quigg, C. E., Tomah, Wis.....1895
Quigg, H. D., Blackwater, Mo.....1898
Quincy, William C., Lowell, Ind.....1892

Ramey, W. M., Adams, Neb.....1901
Rauch, William, Johnstown, Pa.....1900
Ray, C. Wilbor, Nicollet, Minn.....1901
Reading, A. H., 6600 Jackson Ave., Chicago, Ill.....1902
Rees, D. B., 422 E. 6th St., Des Moines, Iowa.....1885
Reid, C. P., Hampshire, Ill.....1900
Reid, Robert A., Newton, Mass.....1882
Reinhart, G. A., 786 West Ave., Buffalo, N. Y.....1890
Reny, Henry, Biddeford, Me.....1899
Rice, F. A., Delavan, Wis.....1895
Rice, John P., Fredericksburg, Texas.....1902
Richardson, Ethyl H., 835 Cedar St., Quincy, Ill.....1900
Richey, John K., Mendota, Ill.....1896
Richter, Augustus F., 27 Beach St., Bridgeport, Conn.....1894
Rigg, C. H., Middletown, Mo.....1896
Rhodes, R. O., 717 Kansas Ave., Topeka, Kan.....1898
Robertson, J. D., 282 Jackson Blvd., Chicago, Ill.....1896
Robertson, W. V., Atlanta, Ga.....1900
Rodecker, C. W., Wonewoc, Juneau County, Wis.....1895
Rogers, E. H., Bloomer, Wis.....1894
Rogers, N. H., Farmington, Minn.....1888
Ross, A. S., Sabetha, Kan.....1899
Ross, J. G., Portland, Ind.....1899
Ross, Lydia, Watertown, Mass.....1899
Rowland, D. C., 2413 Correctionville Road, Sioux City, Ia..1897
Rudd, R. T., Fulton, Ky.....1901
Rush, C. H., Falls City, Neb.....1902
Russell, C. W., 55 S. Limestone St., Springfield, Ohio.....1896

Russell, L. E., The Groton, Cincinnati, Ohio.....1879
Russell, William H., Ipswich, Mass.....1899

Sanderson, Samuel E., East Minneota, Minn.....1902
Schmitz, Henry, 508 W. Chicago Ave., Chicago.....1902
Scudder, H. Ford, cor. 2nd and Thorn Sts, San Diego, Cal.1897
Scudder, J. K., 1009 Plum St., Cincinnati, Ohio.....1888
Scudder, J. Byrd, Room 9, Union Block, Denver, Col.....1892
Sexton, J. G., 117 1-2 Whitehall St., Atlanta, Ga.....1899
Shafer, G. R., Peoria, Ill.....1895
Sharp, C. J., 1008 Washington St., Oakland, Cal.....1891
Sharp, E. G., Orlando, Okla.....1899
Sharp, R. W., Buckland, Ohio.....1902
Shelton, A. B., Boydsville, Ky.....1901
Sherman, S. M., 244 20th St., Columbus, Ohio.....1895
Shepard, William, Columbus, Ohio.....1899
Shirley, G. B., Woodland, Pa.....1899
Shuey, Austin, Prospect, Ohio.....1899
Simmons, B. L., Granville, Tenn.....1891
Sluyter, S. D., Chalmers, Ind.....1902
Smith, Chas. Gregory, 224 Dorchester Ave., Cincinnati, O..1902
Smiley, M. L., Cattletsburg, Ky.....1881
Smith, Mrs. E. G., 349 Broad St., Bridgeport, Conn.....1883
Smith, George R., Plaza Hotel, New York City.....1891
Smith, J. D. Stevenson, 67 Gilbert St., Bridgeport, Conn...1883
Smith, Lee Herbert, 224 Elmwood Ave, Buffalo, N. Y....1890
Smith, Wm. A., 1420 N. 19th St., St. Louis, Mo.....1902
Snapp, George U., Cottage Grove, Ore.....1896
Snyder, George, Weston, W. Va.....1897
Snyder, J. H., Cameron, Mo.....1886
Snyder, W. H., Hastings, Mich.....1899
Spencer, J. R., 952 W. 8th St., Cincinnati, Ohio.....1895
Spring, C. E., Merrill, Wis.....1897
Standlee, C. E., Drewsey, Ore.....1901
Standlee, E. Lee cor. 23d and University Sts., St. Louis, Mo 1891
Stauffer, P. J., Pittsburg, Pa.....1901
Stephens, Albert F., St. Joseph, Mo.....1901
Stetson, B., Central Bank Bldg., Oakland, Cal.....1896
Stevens, J. V., Jefferson, Wis.....1902
Stevenson, E. H., Fort Smith, Ark.....1886
Stillman, J. F., Kilbourne, City, Wis.....1885

Stoller, S. V., Hamilton, Mo.....1885
STRATFORD, HENRY K., Austin, Ill., ex.....1870
Stringham, Bryant, Bountiful, Utah.....1894
Strouse, Lee, 25 E. 4th St., Covington, Ky.....1898
Struble, John, 171 Humboldt Blvd., Chicago, Ill.....1897
Sugg, Henry H., Mount Vernon, Ind.....1899
Swepston, G. M., McArthur, Ohio.....1897

Taylor, A. P., 6th Ave. and N. High St., Columbus, Ohio..1899
Taylor, F. G., Reynoldsburg, Ohio.....1899
Taylor, J. L., West Plains, Ky.....1901
Taylor, J. T., 113 S. 7th St., E., Salt Lake City, Utah.....1892
Thomas, R. L., 792 E. McMillan St., Cincinnati, Ohio.....1893
Thompson, Geo. W., 142 E. 30th St., New York City.....1899
Tiel, Arthur R., Matteawan, N. Y.....1896
Tompkins, A. W., 2 W. 12th St., New York City.....1900
Trask, R. S., Alpena, Mich.....1899
Trowbridge, Edward G., 103 State St., Chicago, Ill.....1901
Tucker, H. S., 126 State St., Chicago, Ill.....1899
Turner, D. J., Cheney, Wash.....1891
Turner, Thomas S., Lebanon, Ind.....1899
Turner, Wm. F., 5023 Morgan St., St. Louis, Mo.....1897
Turner, W. S., Waynesfield, Ohio.....1893
Tuttle, W. L., 120 W. 126th St., New York City.....1882

Unger, C. W., 106 1-2 S. Broadway, Los Angeles, Cal.....1896

Verbeck, Margaret, 1312 Manchester Road, St. Louis, Mo..1892
Vick, W. B., Green Hill, Ind.....1899
Vincent, A. W., Valparaiso, Ind.....1898
Von Lackum, H. J., Dysart, Iowa.....1887

Waddington, J. E. G., 1024 Warren Ave., W. Detroit, Mich..1902
Walker, A. E., Union, Neb.....1901
Wall, Florence ., Valley Ford, Col.....1896
Watkins, Lyman, Blanchester, Ohio.....1899
Watts, T. N., Alma, Kan.....1897
Webster, H. T., 1010 1-2 Washington St., Oakland, Cal...1888
Welty, S. F., Hicksville, Ohio.....1898
West, G. M., 220 S. Beaumont St., St. Louis, Mo.....1892
Wetzel, Tobias H., 422 Clark St., Chicago, Ill.....1897
Wheeler, C. H., Sisson, Cal.....1896

Whiteacre, Hattie F., Frostel Blk., Des Moines, Iowa.....1898
White, J. Newton, Queen City, Texas.....1900
White, Miranda C., 61 West Ave., Rochester, N. Y.....1888
White, William A., Leipsic, Ohio.....1901
Whitford, E. P., Westboro, Mo.....1898
Whitford, H. E., 63d and Stewart Ave., Chicago, Ill.....1902
Whitford, H. K., 228 Chicago St., Elgin, Ill.....1870
Whitford, Susan K., 210 Dundee St., Elgin, Ill.....1892
Whitney, A. B., 148 W. 77th St., New York City.....1882
Whitney, I. J., 26 Main St., Unadilla, N. Y.....1896
Whitney, P. N., Cedar Vale, Kan.....1894
Whitney, W. H., Westfield, Mass.....1887
Widener, A. J., 604 1-2 Main St., Little Rock, Ark.....1891
Wight, Eli, 853 Warren Ave., Chicago, Ill.....1890
Wilbourn, C. E., Magnolia, Ark.....1899
Wilder, Alexander, 5 N. 11th St., Newark, N. J., ex.....1870
Wiley, E. D., 302 W. Walnut St., Des Moines, Iowa.....1892
Williams, F. O., 196 E. Long St., Columbus, Ohio.....1899
Williams, H. D., 4301 E. 7th St., Kansas City, Mo.....1883
Williamson, J. A., Dubois, Neb.....1898
Wills, J. Moss, Vanceburg, Ky.....1901
Wilmeth, F. L., 121 S. 14th St., Lincoln, Neb.....1900
Wilson, C. N., Maysville, Ga.....1891
Wilson, John B., 62 N Main St., Mansfield, Mass.....1897
Winter, G. G., 118 E. Pennsylvania St., Shelbyville, Ind...1899
Winter, C. G., Indianapolis, Ind.....1902
Wintermute, R. C., 129 W. 7th St., Cincinnati, Ohio.....1895
Witt, Stephen, North Dana, Mass.....1896
Wohlgemuth, Henry, 703 S. 8th St., Springfield, Ill., ex....1870
Wolfe, E. A., Dennison, Ohio.....1899
Woodward, A. B., Tunkhannock, Pa., ex.....1874
Wottering, Louis, Marion, Ohio.....1899
Wright, F. M., Athens, Mich.....1890
Wright, John W., Elk City, Kan.....1897
Wright, Philander B., 556 S. Division St., Grand Rapids, Mich.....1890
Wyatt, W. H., Hannath Blvd. near 84th St., New York City.1900
Wyman, W. A., 212 1-2 16th St., Cheyenne, Wyo.....1896

Yancey, J. M., Russellville, Ark.....1901
Youmans, William G., Cedar Bluffs, Iowa.....1899

Young, Alsey B., Brownsville, Tenn.....1900
Younkin, Edwin, 3035 Lucas Ave., St. Louis, Mo.....1878
Yost, Lucien W., 727 Locust Ave., Fairmount, W. Va.....1897

Deceased Members.

Names and Residences at Death.	Year of Death.
Acomb, James L., Tideout, Pa	1901
Adams, Wm. L., Hagardville, Conn	1901
Allen, Paul W., New York, N. Y	1880
Antle, F. P., Petersburg, Ill	1890
Anton, James, Lebanon, Ohio	1897
Armgardt, Henry, Brooklyn, N. Y	1901
Baines, O. O., Chicago, Ill	1896
Bates, David, Bonham, Texas	1896
Barber, Martin N., Watertown, Wis	1893
Beam, Lemon T., Johnstown, Pa	1889
Beam, William C., Johnstown, Pa	1889
Biggers, S. T., Atlanta, Ga	1902
Bell, J. Harvey, New York	1901
Blakely, Thomas, Jones, Mich	1888
Borden, Lafever H., Paterson, N. J	1887
Boskowitz, Herman, Brooklyn, N. Y	1882
Bowlsby, J., New York	1902
Bricker, William, Wabash, Ind	1901
Brigham, L. B., Aurora, Ill	1893
Brockway, Theodore, Youngstown, Ohio	1900
Bundy, John H., Oakland, Cal	1881
Burton, Rollin J., Albany, N. Y	1873
Butcher, J. C., Urbana, Ohio	1902
Buxton, H. W., Worcester, Mass	1882
Caiger, A. E., Boston, Mass	1895
Clark, Samuel, Lawrence, Ill	1893
Conklin, Amariah, Manchester, Mich	1892
Corey, John A., Florence, Ky	1889

COVERT, GEORGE, Clinton, Wis.....1902
Covington, Henry, Pleasantville, Iowa.....1875
CURRYER, W. F., Indianapolis, Ind.....1902

Dale, George W., Iola, Wis.....1901
Darman, William, Philadelphia, Pa.....1887
Davison, A. L., Weiser, Idaho.....1897
Day, L., Monroe, N. Y.....1901
DeCrow, Herbert, Newark, Ohio.....1900
Delbridge, George H., Atlanta, Ga.....1899
Denman, J. R., Charleston, Ill.....1878
Douglass, David D., Port Leyden, N. Y.....1899

Feather, Ira C., Sandy Lake, Pa.....1888
Firth, Horatio E., Brooklyn, N. Y.....1883
Forster, Andrew P., Fort Scott, Kan.....1889
Fraser, Thomas R., Pictou, N. S.....1882
Frazee, Lewis, Perryville, Ind.....1882

Gamble, William J., Mosiertown, Pa.....1888
Geddes, Robert W., Winchendon, Mass.....1886
Gibbs, Aaron L., Hope, N. J.....1884
Goetchius, L. O., Saratoga Springs.....1901
Goss, I. J. M., Marietta, Ga.....1896
Granger, Thomas A., New York City.....1880
Green, H. H., Atlanta, Ga.....1897
Gregory, John L., New York City.....1882
Grinnell, John L., Peabody, Kan.....1892

Hamilton, Robert, Saratoga Springs, N. Y.....1894
Harney, Cambell H., Waupun, Wis.....1888
Harris, Thomas L., Cazenova, N. Y.....1891
Hatch, William Collins, New Sharon, Me.....1902
Hausen, Christian, Oakland, Cal.....1882
Hector, Cornelius, Rochester, Fulton County, Ind.....1896
Hobson, William H., Irving, Ill.....1890
Hodgkins, N. Dwight, Rocky Hill, Conn.....1884
Hooper, Marvin S., Burlington, Iowa.....1896
Hopkins, Charles C., Evans' Mill, N. Y.....1884
HOWE, ANDREW J., Cincinnati, Ohio.....1892
Howe, Julia R., Chicago, Ill.....1898

Hulbert, Joel C., Rochester, N. Y.....1891
Hull, George E., Carthage, N. Y.....1885

INGALLS, WALTER M., Amelia, Ohio.....1879
Ingham, Henry, Bellows Falls, Vt.....1889
Ingraham, S. W., Chicago, Ill.....1891

Jilson, Harvey D., Fitchburg, Mass.....1878
Johnson, Ira T., Orange, Mass.....1888
Johnson, J. R., Cotton Gin, Texas.....1897
JOHNSON, JOHN WESLEY, Hartford, Conn.....1872
Johnson, John G., Wellfleet, Mass.....1896
Johnson, John H., New York City.....1874
JUDD, SAMUEL S., Janesville, Wis.....1887

Kenney, Moses B., Lawrence, Mass.....1881
Kermott, John W., Detroit, Mich.....1882
Kirkpatrick, George, La Harpe, Ill.....1898
KING JOHN, North Bend, Ohio.....1893

LATTA, W. S., Lincoln, Neb.....1901
Linquist, Charles F., New Haven, Conn.....1889
Lounsberry, Charles F., Nevarino, N. Y.....1884

Mallory, M. B., Los Gatos, Cal.....1899
Marmon, John W., Mitchellville, Iowa.....1876
Martin, W. C. E., Greenville, Pa.....1885
Mason, John D., Boston, Mass.....1892
McLeary, Matthew, Boston, Mass.....1892
McMullen, William, Burlington, Kan.....1891
McMurtrey, J. N., Salem, Mo.....1897
Merkel, Gottfried H., Boston, Mass.....1893
Miles, Mason M., Aurora, Ill.....1893
Murphy, J. J., Salt Lake City, Utah.....1894

Newton, Edgar Orrin, Hot Springs, Ark.....1877
Newton, Robert Stafford, New York City.....1881
Nicolay, William J., Minier, Ill.....1896
Nims, William W., Syracuse, N. Y.....1896

Owen, Reuben H., Haverstraw, N. Y.....1883

Palmer, N., Brooklyn, N. Y.....1876
Parr, John, New Boston, Mich.....1889
Phelps, Mrs. L. J., Syracuse, N. Y.....1895
Pickerell, George W., Indianapolis, Ind.....1895
Piper, Henry Beam, Tyrone, Pa.....1895
Potter, A., Springfield, Ohio.....1885
Potter, Stephen H., Hamilton, Ohio.....1883
Povall, Henry, Mount Morris, N. Y.....1892
Prentiss, M. M., Rushville, Ill.....1883
Purdie, A. J. N., Otselic, N. Y.....1890

Randall, L., New York.....1902
Robinson, Morton, Newark, N. J.....1893
Roche, David F., Boston, Mass.....1892
Rolphe, Stephen M., Belle Plaine, Kan.....1885
Rosenberg, J. H., Osage City, Kan.....1889
Rush, Alfred B., German, Ohio.....1885

Sandmeister, Charles, Bellevue, Ohio.....1888
Sax, Austin J., Americus, Kan.....1887
Schlabaum, John C., San Francisco, Cal.....1902
Schmitt, Joseph A., Belleville, Ill.....1893
SCUDDER, JOHN M., Cincinnati, Ohio.....1893
Shaw, Edward M., Allen, Mich.....1882
Sherwood, Augustus C., San Diego, Cal.....1886
Simmons, Thomas, Hartford, Conn.....1894
Smith, Dennis F., Brooklyn, N. Y.....1884
Spencer, Horace, Plainfield, Ill.....1900
Springsteen, Albert G., Cleveland, Ohio.....1882
Stanton, Lyman, Copenhagen, N. Y.....1870
Stillman, Asa G., Troy, N. Y.....1884
STOW, BENJAMIN JONES, Brooklyn, N. Y.....1888

Taft, Simon, Newark, N. J.....1889
Thompson, Alexander, Meadville, Pa.....1885
Thompson, C. D., Oil City, Pa.....1891
Tiesler, Eugene, Orange, N. J.....1893

Vail, Albert H., Carlstadt, Cal.....1893
Van Riper, J. A., Shaftsburg, Mich.....1900

Waller, W. D., Columbia, Conn.....1896
Wares, Abel, Haverhill, Mass.....1897
West, H. D., Southbridge, Mass.....1899
Westcott, Austin B., Chicago, Ill.....1891
Williams, Daniel Bullard, Opelika, Ala.....1890
WILLIAMS, DAVID, Columbus, Ohio.....1902
Williams, John W. R., Opelika, Ala.....1894
Williamson, E. J., St. Louis, Mo.....1895
Winans, Robert, Benton Harbor, Mich.....1883
Wood, Alfred A., Jefferson, N. Y.....1875
Wood, Almon, Durhamville, N. Y.....1882
Wright, C. E. M., Gilman, Ill.....1900
Wright, S. B., Lane, Kan.....1884
Wright, William R., Bath, Me.....1887

YEAGLEY, BENJAMIN L., Johnston, Pa.....1895
Yeagley, Henry L., Lancaster, Pa.....1902
Yost, P. D., St. Louis, Mo.....1883

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